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EDITORIAL NOTES.

BUBONIC PLAGUE

Plague, or pest, has existed in California since March, 1900, and possibly for a somewhat longer period. In 1894 it appeared epidemically in Hong Kong, probably coming from the interior of China, and four years later an epidemic broke out in Bombay. It could not have reached San Francisco earlier than 1894 or 1895 and probably did not come until 1898 or 1899. The first recognized and verified case was found March 6th, 1900. We all know the history of events following its discovery; it is the same history of denial, abuse, antagonism, which has been written wherever an epidemic of plague has occurred. But the fight, in San Francisco, while long and bitter, was slowly but surely won, and no case was noted in the city from February, 1904, till May, 1907. During this period, however, cases had been noted in Contra Costa County and in Alameda County, and the circumstances under which they occurred seemed clearly to point to the ground squirrels as the agents carrying the disease. It has been impossible, however, up to the present time, to obtain a squirrel or the body of one sufficiently fresh to determine its condition. All the evidence bears us out, however, in assuming that the infected rats—or fleas—of San Francisco, carried the infection to the ground squirrels of Contra Costa and Alameda Counties, in the early years of the century, and that the disease has remained in those sections, slowly spreading, up to the present time. Doubtless the present epidemic in San Francisco had its origin in infected rats or fleas coming from one of these counties. So far as San Francisco is concerned, the presence of plague need excite no uneasiness; but with regard to the bay counties, however, the matter is quite different. The gravest danger lies in our ignorance, for we do not know where the infection is, how far it has traveled nor in what directions. In dispute of these assertions it is argued that very few cases have been noted in the counties mentioned and that if the disease really did exist and had existed in this territory, there would have been more cases. But that argument is without weight for we could not expect to find many cases of the disease in sections where the people live an out-of-doors life, are not crowded together and have plenty of air and sunshine. Moreover, they ordinarily do not come in close contact with squirrels nor invade the territory of the squirrel; and when the squirrel gets sick, he goes into his hole to die.

WHAT TO DO.

Clearly, the gravity of the situation is not to be underestimated nor brushed lightly aside with a mere negation or a boastful clamor about our "wonderful climate;" plague pays scant attention to climate, for the rat — and consequently his favorite disease, plague—thrives equally well in all climates. Nor is this a matter that concerns only California; the whole United States is interested, for the rat is a great traveler and where he goes he takes his fleas and his plague. We have got to find out just how far the infection has gone and then begin to get rid of it, and there is just one way of doing that—a careful inspection of all dead by someone who knows plague when he sees it. No matter how competent the man, no matter how excellent a physician, if he has not had experience with plague he is worthless for this work. It is universal experience that at least forty per cent of cases are not diagnosed as plague by the attending physician, even in times of marked epidemic, and the probabilities are that in our own experience in this state, the percentage of unrecognized cases would come nearer a hundred. One physician who has had four cases in his practice, and was on the lookout for the disease all the time, has reported that he did not make the diagnosis, unaided, in a single one of these cases; and this was not in San Francisco, either. The sudden death of a person with an ambulatory case of plague is a matter frequently noted in all epidemics of this disease, and the signs which would indicate the infection may be few and trifling; such as would be easily overlooked by one untrained. The counties about the bay should be gone over as with a fine-tooth comb and the inspection of all dead bodies before burial permits have been issued, should be compulsory. Nor should this work be confined to the bay counties alone. The contiguous country should also be placed under suspicion until we know exactly whether it is clean or not.

HOW TO DO IT.

Making compulsory the inspection of all dead by an observer trained in plague work, is the first step in the warfare, and this we will have to do voluntarily or we will be compelled to do it by the declaration of quarantine against California. You may think that is an extravagant suggestion, but it is closer to us now than most of us know and is as sure to come as to-morrow's sun unless we get very busy, and that soon, and find out exactly where the disease is, and then fight it. The health officers of all the surrounding counties should come to San Francisco and study plague under the supervision of the Marine Hospital men, who will gladly aid them, and thus know something about it and be able to know it when they see it. Until they are trained, properly qualified medical officers should be employed, and enough of them, to make the investigation of all dead persons. All physicians should be aroused to the presence of the disease and warned to be on the watch for it, and to co-operate in the matter of official inspection. Furthermore, the public should be informed of the exact situation and their co-operation secured; let the voting citizen know that plague is here in our state and that the quicker he loosens the purse-strings and starts to fight, the cheaper will be the fight in the long run; it has been said, if memory serves, by Kitasoto, that every case of plague costs the community $7,500.00, and that is certainly not an overestimate, if we consider what it will mean in the course of time. If the countries and towns cannot stand the expense of the necessary work, the state should not hesitate to step in and do it. Dollars spent now will mean thousands saved in the long run. Bring all the pressure you can upon your newspapers and force them into aiding in the work of publicity. Tell the people what we know about plague—that it is a disease of rats (and probably squirrels), conveyed to man by means of fleas, in the great majority of cases, though easily transmitted directly. When the rats are destroyed plague is destroyed, and rats cannot live or thrive if their food supply is taken away. If the people will not help, by cleaning up each his own premises, keeping refuse and food where rats can not get it, killing and catching rats, and generally aiding in the work, we can do mighty little. The public must be enlightened and made to co-operate.

THE PRESS.

The newspapers, instead of helping, as they should, show a disposition to belittle the whole thing and to make the people believe that either there is no plague here, or that it amounts to next to nothing. When the disease appeared in San Francisco seven years ago, the press, with one accord, abused everybody connected with fighting the infection; the governor was equally obnoxious and aided the press in its attacks upon the medical profession and the officers of the Marine Hospital Service. This time they have not been quite so bad, but they have done little or nothing to help, and the Chronicle, from its "tower of golden silence," has ridiculed the whole thing. The papers are like the ostrich who buries its head in the sand and thinks it is hidden; they forget that, if they will not print the truth, other papers in other cities will print things that are far from the truth. Already, in Chicago, the papers have printed wonderful and fearful stories about plague, thousands of deaths, and people fleeing from rats which pursue them in the streets. In Mexico a paper printed the statement that there were nine hundred cases of plague in San Francisco; in other places equally farcical stories have been printed. This policy of silence or of negation is dangerous in the extreme and we should do everything in our power to show the papers the foolishness of their attitude; they think it will excite the people and "hurt business" if they print the facts. But if the people are not informed of the facts and the danger—for there is real danger—they will do nothing for they will not know what to do. Teach the people that *plague is here in our state;* that it is not a question of preventing it from getting a foothold, for a disease that has been with us for seven years can be said to have obtained a pretty fair foothold; that it follows the lines of rodent travel and migration and that destruction of rodents means a stoppage of plague, and nothing else will mean that. Let them get excited if they must, but let them get busy and help. There is no *immediate* danger of a serious lighting up of the epidemic, but there is a remote danger of that unfortunate occurrence if we do not find all the foci, find where it is, and clean it out. And the longer it slumbers along, the greater is the ultimate danger of a serious conflagration. Ignorance is the greatest of dangers; enlightenment means ultimate health and cleanliness.

STATE SOCIETY.

The next meeting of our State Society will be held at Coronado, April 21st, 22d and 23d, 1908. The value and importance of our organization are becoming more and more clearly defined with each passing year, and it is certainly to be hoped that the attendance this year will be larger than ever before. In many sections of the state our men are awake to the duty they owe the community in the matter of the protection of the public, and they are taking active part in the "science or art of government." It is through the State Society that these energies are centralized and consequently the work and the importance of the Society are steadily growing; and also its value to the people of the state. Every reputable physician of every county in the state should be a member of his county society (and consequently of the State Society) and as many as can possibly leave home for a few days should attend the meetings of the State organization. The getting together, becoming acquainted with each other, learning each other's good qualities and rubbing off some of the corners are matters quite as important as the discussion of scientific subjects. As a natural consequence of the nature of our work, the tendency is for medical men to become narrow and self-centered and it is general meetings such as

those of the State Society that do much to correct these evils. Every county society should be represented by an active delegation, and particularly by the secretary of the society, for on him falls most of the work; where there is a good, active secretary, there will be found a good live county society, and as the secretary is the working member of the society, he certainly should attend the meeting of the State body and participate in its work. Next month we hope to publish an outline of the program which, the JOURNAL is informed, will be unusually good and will embody some very carefully thought-out changes from the regular order of things. Do not fail to attend.

ENCOURAGING REPORTS.

Now and then there is something that comes along and encourages those who are working for better organization of the medical profession and more active enlightenment of the public. In this issue there are two items, to be found elsewhere, which are very encouraging. One is the information furnished by Dr. Hoag as to the supervision of school children in Pasadena. In the education of our children we, as a people, offer another striking illustration of our almost total disregard for life and health, with a full appreciation of wealth and what goes to the getting of it. Thus we recognize by the existence and maintenance of our public school system, the value and the benefit to the individual of an education; but we do practically nothing to supervise the health of the growing child when he is being educated. We offer no protection to him, in either health, life or the aid in his own individual efforts which may be suggested by competent medical supervision. Here and there about the country one may note a school in which there is an occasional or periodic examination of school children, but the continued supervision of them during their entire stay in the school, as indicated by Dr. Hoag, is almost unique. And it is right that this work, as he justly points out, of tremendous value to the child, should be paid for just as much as the work of the one who teaches the child common knowledge should be paid for. It is true that our profession is altruistic, but that we should be called upon to do work of this very necessary and valuable nature for nothing, is carrying altruism to the point of absurd imposition. Communities of men will devote their energies and their resources to the conservation of material prosperity and not murmur; but when they are requested to devote some portion of their resources to the conservation of their own health and sanitary welfare, they do more than murmur—they howl. Why?

THE OTHER.

The other item of encouraging information is the report of the year's work which comes from Santa Barbara County. Here is one of the smaller counties of the State, having a county society which is not and can not be a large one, yet which has done much during the past year to bring the members of the profession in touch with each other, and the profession of the county in touch with the citizens. Matters of hygiene, public health, sanitation, and the like, should be subjects for common discussion between physicians and laymen of all of our communities, through the medium of the county medical society. This has been written of so frequently in the JOURNAL that perhaps the iteration may become tiresome; yet it will continue to be referred to. Santa Barbara County is to be highly congratulated upon its county society, and the JOURNAL urges the society to continue, in the coming year, the excellent work it has begun in the year just closing. Meet frequently with the laymen of your community and teach them something of the work our profession is trying to do—for their own good and their own benefit, so that they may aid and not hinder us in the work.

CURIOUS ARGUMENT.

In a recent issue of the JOURNAL we stated that the *Western Druggist* had been guilty of printing an untruth when it said that Dr. McCormack was not correct when he accused the N. A. R. D. of pernicious activity in the various legislatures against pure food and drug legislation, and we proved it. The *Western Druggist,* in reply, can find nothing to say except to make a personal attack upon Dr. Philip Mills Jones and accuse him of all sorts of things in connection with his active support, a few years ago, of the plan to establish a bureau for the certification of standards of food and drugs—a plan, by the way, which could not have been so awfully bad, for the Council on Pharmacy and Chemistry is now doing all the work, or most of it, that was contemplated by the old bureau plan, and the United States is doing all the rest under the pure food law. This is said merely in passing, however; the really amusing thing is the way so many of those who fatten at the nostrum trough seem to think that personal abuse is argument, and that if they can only hit a few heads with the seductive brick-bat, they will stop the onward march to pharmaceutic cleanliness and decency. Not so, gentlemen; try again. By the way, if that allusion to "the office shotgun" was in the nature of a threat, the JOURNAL takes pleasure in advising the *Western Druggist* that Dr. Philip Mills Jones visits Chicago every year—and he is not at all superstitious.

SPLENDID SUPPORT.

Occasionally, as one contemplates the medical profession in its sociologic aspects, he may see something cheerful and encouraging him to believe that the formerly all-pervading envy, hatred and malice is somewhat giving place to respect, friendship and co-operation. Indeed, when one thinks that up to a very few years ago our profession was to all intents and purposes absolutely without organization, and that the various units were either busily occupied in hammering each other, or dividing up into squads for the purpose of hammering other squads, any harmonious action, any

expression of cordiality, comes as a distinct sensation and indication of progress. One of the most delightful illustrations of this progressive feeling of better things was recently offered by the medical profession of the County of Los Angeles in giving, on November 16th, a banquet to the health officer of the county, Dr. L. M. Powers. Some two hundred and fifty physicians gathered together to do honor to themselves and to Dr. Powers, and the cordiality and sincerity of the event could not have failed to affect and instruct every one present. Think of it! Two hundred and fifty doctors actually coming together for the sole purpose of testifying to their support of *one of their own profession!* And surely it must have been an object lesson to the mayor and the members of the council who were present, to see with their own eyes the attitude which the medical profession took toward the health officer. And it was an assemblage without school, without sect and without prejudice; all schools and all cliques were there—and "clique" is not used in a disparaging sense. And all had something to say in praise, support or commendation of Dr. Powers. It would be a mighty good thing if the members of our profession would get together more often for similar peaceful demonstrations.

THE PROPHYLAXIS AND ERADICATION OF PLAGUE.

By RUPERT BLUE, M. D., Passed Assistant Surgeon, U. S. Public Health and Marine Hospital Service.

The consideration of the causes of plague naturally leads one to ask what measures should be adopted to stamp out the disease. Knowing the cause, the mode of transmission, and many of the contributory factors of its spread, the eradication of plague can be accomplished by the practical application of these basic principles. While it is improper to mention things before persons, in this case it is the natural sequence, because rat plague is the forerunner of human plague, and it is only by a careful study of the former that we may understand how to eradicate the latter. Let us first, then, consider the plague as it exists in the rodentia.

The epizootic disease of rats known as plague is communicable to man through the agency of the flea, by infected food and air. The consideration of the prophylaxis of this disease therefore naturally falls under these heads.

Since the most remote times the connection between rats and plague has been fully recognized, but it has remained for the modern scientist to establish this beyond question. The researches of the British Commission in India have made a strong case against the rat and have proven beyond cavil the transmission of the disease by the flea. Simpson's work in Hong Kong goes a long way to prove that the dried excretions of plague infected rats entering the human system through the intestinal or respiratory tracts is followed by septicemic or pneumonic plague. It is therefore apparent that whatever measures of prophylaxis or eradication we are to take must be directed against rodentia, particularly rats and squirrels and their parasites.

First we may consider the method of the spread of the disease in rats. Here we have an animal frequenting the habitations of man and subsisting on all manner of refuse and garbage, making frequent visits to the sewers and returning therefrom gorged with all manner of filth and pollution which may be infected with any of the pathogenic bacteria. Rats become infected with plague by devouring the carcasses of their kindred who may have died of the disease, and through the agency of the flea. The well rat is quite able to defend himself from these pests, but once sick they attack him in great swarms, suck his blood, which contains the B. pestis, and on his death leave his cold body for the first animal from which they can secure sustentation.

In the rat we have all the types of the disease which are observed in man, and, in addition, a chronic form in which the bacterium is encapsulated in the glands of the viscera. Here we have ambulatory foci which will assist in spreading the disease.

The prophylaxis of rat plague contemplates three things: First, the destruction of rats; second, the prevention of their entrance into the habitations of man; and third, the adoption of such measures as will prevent the shipment of infected rats into non-infected territory.

To destroy the rat, his home must be made untenable and his food supply forever cut off. All rat-holes and rat-runs in infected blocks should be flushed with an active antiseptic solution, poisons such as arsenic or phosphorus paste placed therein, and the holes closed with cement or broken glass and bricks. The entire infected region should be poisoned at frequent intervals with the chemical poisons mentioned above or the biological poison known as Danysz' virus. This consists of a culture of the B. typhimurium, and if of high virulence is most efficacious. In 1889, Laeffler, while investigating a sporadic disease among mice, discovered the B. typhimurium. Danysz, recognizing the possibilities of such a bacterium, exalted its virulence until it was lethal to rats. It produces in them a contagious disease, characterized by a fatal entero-colitis. The method of distribution of this organism is to mix alkaline bouillon cultures which have been incubated from four to six days at room temperature, with yellow corn meal or any of the farinaceous foods. The cultures are liable to rapid deterioration and should therefore be spread at frequent intervals. A reliable check on its efficiency is to trap rats in the district where the poison has been spread and to quarantine them in the laboratory. On their death they are necropsied to determine if they have died of mouse typhoid. The rats should be trapped with wire cage or snap traps and an active campaign of extermination carried on against this pest, which annually destroys millions of dollars of merchandise and is a constant menace to the health of the community.

To prevent the entrance of rats into the habitations of man, all places of human occupation should be made rat-proof. This is accomplished by the

concreting of all basements, the screening of all openings near the ground level, the tight fitting of the entrances and exits of the house plumbing and the closure of all roof openings through which the roof-rat might find entrance. The fact is often overlooked that the sewers are the main traveled road of the rat, and that it is through defects in them that they enter premises. The sewers should therefore be made rat-proof. This is accomplished by the substitution of vitrified clay or concrete sewer for the ancient brick and mortar affair which is riddled with openings through which the rat can pass. The catch-basins should be protected by gratings and the traps made sufficiently deep to defy even the most expert divers of the rat population.

No city can hope to be rat-free unless the laws relative to the collection and disposal of garbage are most rigidly enforced. Each house should have a metal garbage can covered with a tight-fitting lid. The city should collect the garbage and destroy it by incineration and no rat food of any kind should be allowed to remain exposed. Mills, bakeries, granaries and warehouses, in addition to rat-proofing, should be required to protect their stores from rats. Stables are particularly dangerous. They should be concreted, provided with a tight manure bin and metal-lined container for feed. They should be connected with the sewer and flushed frequently to wash out grain fallen from the feed bins. The manure should be removed frequently.

The prevention of the shipment of infected rats into non-infected territory is of the utmost importance. In plague times the authorities should make every effort to prevent rats making their way on board vessels. This is necessary to prevent the spread of the disease to other ports and to obviate the placing of quarantines by other cities. To accomplish this, freight should be stored in rat-proof and rat-free warehouses. Piers may be protected by a drawbridge which is raised by night, and by surrounding the freight with high metal fences and the placing of rat-guards on the joists and rafters.

All of these measures are not applicable to the smaller communities and the country districts, but it is the duty of every health officer to carry out the principles laid down above as far as is practicable in his own environment. Too much stress cannot be laid upon the ground squirrel as a possible factor in the dissemination of plague. Laboratory experiments have proven that they are susceptible to the disease, and in my own experience I have seen at least one case the history of which indicated that it was contracted in this way.

Passing from the consideration of rat-plague to human plague, the prophylactic measures to be adopted to protect man are, the early discovery and isolation of all sick of plague, the daily examination of all contacts for a period of seven days and their protection by immunizing doses of Yersin's serum or Haffkine's prophylactic. The earliest as well as the surest way to discover the existence of the disease among the living is the careful examination of all dead by physicians skilled in the diagnosis of plague. In plague times every municipality liable to the disease should pass ordinances forbidding the removal of dead bodies which have not been viewed by a trained medical inspector and declared not infected with plague. All persons dying of plague should be cremated or buried in quicklime in metal coffins. It should be a routine practice to require a necropsy on the bodies of all persons dying after a short illness of pneumonia, typhoid fever, or from undetermined causes. Cases presenting palpable glands or petechial eruptions should be viewed with suspicion and the diagnosis determined by post mortem examination.

Undertakers should be warned that the act of embalming bodies in which there is a suspicion of plague is a danger alike to the persons performing the operation and the public at large. The solutions used in this process render the body sterile and make it impossible to recover the organism and arrive at a correct diagnosis.

Health officers should make a careful study of the vital statistics of their counties and should make a careful investigation of all unusual diagnoses, cases of rapidly fatal pneumonia, typhoid fever, uremia and the like. An increased mortality should put them on their guard. Wherever laboratory facilities are lacking specimens should be taken of the spleen, lung, kidney and lymphatic glands and sent to the nearest bacteriological laboratory for examination and confirmation. This is equally applicable to rats.

Whenever it is thought that plague may exist in a community, a carefully organized campaign should be immediately instituted. The territory should be divided into districts and a trained medical man placed in charge of each. A sanitary survey should at once be made and all premises carefully inspected. A record should be made of the conditions found at this time and the opportunity taken to instruct the general public of the methods of the spread of plague and the necessity for destroying rats and rat-food.

Whenever a case of human or rat plague is discovered, the building should be fumigated with sulphur in the proportion of five pounds to the one thousand cubic feet of initial air space, after careful sealing of all openings through which the gas could escape. The carpets should then be removed and beaten, the floors swept and the sweepings burned, and the floors of the house washed down with an active antiseptic solution to kill fleas and flea-eggs. Following this, the yard and outbuildings should be similarly treated and a careful examination made of the space beneath the floors and in the hollow walls for the bodies of dead rats. The same measures should be applied to contiguous houses and the entire block and the blocks surrounding it freely poisoned.

Bedding and clothing contaminated with the excretions of plague cases should be destroyed by burning. Other articles liable to convey the infection should be immersed in bichloride, 1 to 500, or carbolic acid, 1 to 40.

Subsequent cases occurring among non-contacts would indicate an error in technic. Houses or

buildings in which plague continues to manifest itself after the application of the above measures should be vacated and destroyed to prevent the spread of the disease. Badly infected areas may be depopulated and the people removed therefrom, placed in detention camps for observation until the period of incubation is passed.

It should not be forgotten that plague is frequently a ship-borne disease and follows the lines of travel. This requires an outgoing quarantine and the fumigation of all vessels touching at infected ports prior to departure.

Plague is a disease slow to gain epidemic proportions. Planted on a virgin soil, its subterranean mode of development requires time for it to reach its greatest intensity. Nine years passed before the great London epidemic reached its height, but once the disease strikes root, it is difficult to eradicate and its climax is a horror.

THE EVOLUTION OF THE DISEASE-ENTITY CALLED MANIO-DEPRESSIVE INSANITY, AND ITS MAIN FEATURES.*

By A. W. HOISHOLT, M. D., Stockton.

(Concluded from page 292)

When in a case several attacks of maniacal excitement and depression have taken place, it is not difficult to diagnose manio-depressive insanity, although changes in the mental condition from elatedness to despondency or stupor are met with in general paralysis and katatonia; but when the history does not give information of previous characteristic changes in affects, and one is dealing with the manifestations of the first attack, it is often very difficult to come to a conclusion. If the patient in question is beyond the middle age, Kraepelin lays stress upon a differentiation between manio-depressive insanity and true melancholia or melancholia of senilescence, which he considers a disease quite distinct as to its inner nature from the former. In this, many psychiatrists disagree with him. Thalbitzer places melancholia of senilescence—depressive forms of devolutional psychosis, as (7) Dr. Farrar terms them, within the boundary of manio-depressive insanity, and ascribes the features which are especially characteristic of it to the influence of age. The only cases excluded by Thalbitzer from melancholia of senilescence are those of depressive Wahnsinn, which he thinks belong in a class by themselves. The chief clinical difference between true melancholia and manio-depressive insanity is an absence of psychomotor inhibition in the former, but as Thalbitzer has shown, this is also absent in the mixed form of manio-depressive insanity, called by Kraepelin and Weygandt "the agitated depression," which is characterized by depression of the affects and psychomotor excitation. How can one then differentiate this from melancholia, especially as this has been admitted by Kraepelin to be likewise subject to relapses? The mildest forms of manio-depressive insanity, which as Kraepelin says, pass imperceptibly into certain morbid personal peculiarities, and which perhaps never fall into the hands of the alienist, are frequently considered cases of hysteria, neurasthenia or hypochondriasis. In the conditions of hysterical excitation, which these attacks sometimes resemble, we miss the flight of ideas, the elated character of the emotions and the pronounced divertibility. The excitement is more theatrical in character, shows more childishly affected manner of talk and action. There is an impulse to act, but no general craving for activity and the excitement is of shorter duration.

Many of the cases diagnosed by some writers as acute or periodical paranoia are simply maniacal or depressive states—manifestations of the manio-depressive insanity, the diagnosis of which may usually be established by proving the presence of elatedness, loquaciousness, craving for activity, mild flight of ideas, increased divertibility, or on the other hand, thought-inhibition, hopelssness, irresoluteness, etc., or a mixture of these symptoms, proving that the apparent paranoic delusions are of an entirely different nature.

Cases of manio-depressive insanity, especially the cases of maniacal stupor, may sometimes resemble katatonia (dementia præcox), but such patients are not negativistic; they take more notice of their surroundings, are more approachable, not so peculiarly stiff—do not show the reserved demeanor when asked to shake hands. When they speak they give evidence of impoverishment of thought, but do not show the stereotypy or the non-sensical incoherency of the katatonic, nor are the ideas of unpardonable sin mixed with persecutory ideas as in katatonia or dementia præcox. Kraepelin mentions that maniacal as well as depressed cases are occasionally thought to be feeble-minded. He mentions a patient who for months would laugh to herself in a silly manner and at the most now and then give her neighbor a dig. Kraepelin had considered her feebleminded, but she recovered and after her recovery proved to be unusually bright, and well educated.

In conclusion it may be said that manio-depressive insanity is essentially a psychosis of the affects, its fundamental characteristic being that its affect-symptoms are only quantitatively differentiated from the physiological state of the feelings and emotions. As (8) Thalbitzer says "the psychosis discloses its origin as the pathological exaggeration of a physiological affect by showing a certain proportionateness between the depth of the depression and the grotesqueness of the despondent fallacious ideas. Whenever the depression becomes diminished the despondent ideas will likewise assume less monstrous dimensions."

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Discussion.

Dr. P. K. Brown, San Francisco: It is surprising the number of cases that come into the hands of the general practitioner, cases of insanity in individuals who have never before been insane, and from families where there is no reason to suspect this trouble. In this condition one has to deal with people whose extraordinary ignorance of the usual conditions is usually equaled by that of the physician. Early in my practice it became evident that the most valuable help I could have in dealing with the constant cases was a knowedge of the classification of these cases and an idea of the prognosis, because of the influence it always has in enabling one to advise what had best be done. I arranged with great interest a number of cases in this manio-depressive class of insanity. I get cases where I see that their symptoms months before would have been diagnosed as melancholia or neurasthenia. I recall a case of a personal friend who had the habit of wandering about the streets at night because of sleeplessness. The condition of muscular instability and first manifestations of acute mania came during one of these night wanderings when he saw a man talking loudy to a woman, and the result of his wild interference landed him in an institution. I was impressed with the fact that there was an unusual religious period of two or three months, as far back as six months. That there was a period of great mental activity, when he did an enormous amount of writing on subjects in which he was not ordinarily interested. I have had cases in the last two weeks, cases of manio-depressive insanity. After watching the patient one can sit down with the family and trace out incidents that should have been recognized by the family physician. I wish to emphasize what Dr. Hoisholt has said about the preliminary period of depression and the period in which there is very often marked evidence of increased religious feeling. This is the characteristic in a number of cases I have seen, and it is so distinct that mania occurs almost like the chill in malaria after a period of fever.

Dr. Gardner, San Francisco: I have been very much interested in this paper. If Kraepelin himself in the diagnosis of this insanity cannot place about 50% per cent of his cases, then I think the general practitioner may be excused for some of the mistakes mentioned. There is an excuse for the mistakes to a general extent, in that the general practitioner does not frequently come in contact with cases of this kind, and then only for a short period. The form of insanity the Doctor has called attention to is a new classification and a good one, in that many times we come in contact with cases where the maniacal condition makes us doubt whether to classify it as melancholia.

Dr. Hoisholt, Stockton: In studying these diseases one is dealing with an organ that does not secrete or excrete any substance that will enable one to learn something more definite with regard to its healthfulness. Kraepelin has tried to ferret out the nature of the disease that he studied and the only way to do that is to learn in the history of the case and the actions of the patient the wav in which it is violating laws. I wish to lay stress upon this in connection with the study of insanity, that one must not stop with that but go into the study of the manifestations in the way that they deviate from the normal. The man in the asylum does not see these cases in the early stages. The only way to make progress in the knowledge of these cases is to pursue careful study of them before they arrive in the asylum. Opportunity of that kind can be afforded if the colleges had a clinic where the patients could come and the early stage could be outlined before leaving that institution. With regard to the frequency of the disease, I think that perhaps more than 15% will be reported later on. There is only one disease which is more frequent than that, and that is alcoholism.

SYPHILIS—EXTRA-GENITAL CHANCRES.*

By RALPH WILLIAMS, M. D., Los Angeles.

The subject of the extra genital mode of infection is of great interest to us and to society in general.

First: Because it is possible for any one thus to acquire a dangerous and mutilating disease in so many different ways, and to have their whole life made miserable, for no matter in what manner contracted, the disease by the laity is regarded as directly venereal or as hereditary, and carries with it a certain disgrace.

Second: As a value to society, for the reason that if there had been more cases of extra-genital infection, society, which at present even tabooes the name, would have looked upon the disease in its proper light, not as a punishment of vice, and of necessity as an indication of loose morality; but as a constitutional disease with the possibility of it being acquired by both a mediate and immediate manner of infection; possessing to its victims a danger, reaching into the lapse of years, and capable of being transmitted to their progeny. A knowledge of syphilis (old as man—protean as the devil) possessed by society would teach it to be more careful, more cleanly in the use of various articles, and realizing the dangers of this disease and having been taught the many avenues of infection, the people would have better understood and more generally aided in the subjugation of it and other diseases through the propagation of the many great sanitary reforms of recent years, or those which are to follow as prophylactic medical science mounts ever to its ideal. Society in general can hardly be blamed for its ignorance when we consider the fact that so many extra-genital chancres are never even suspected by the general medical man until the roseola or the mucous patch spurs his memory to the fact that even old friends may sometimes change their residence.

Case 1, September, 1900.—A miner, 40 years old, came to Los Angeles to have some dental work done. It became necessary to pull a left lower wisdom tooth. The laceration filled and apparently healed, but about 16 days later became sore and slightly swollen. He was treated by the dentist for several days. About twenty-three days after the ex-

*Read at the Thirty-seventh Annual Meeting of the State Society, Del Monte, April, 1907.

traction the patient was sent to me by a third party. At this time there was an irregular ulceration of the gum where the tooth had been, tender to the touch, and extending to buccal edge of the gum. The ulcer was depressed in the center, practically no discharge, the base was puffy, edges hard and marked by a reddish brown line. There was both submaxillary and anterior auricular glandular enlargement. The specific nature of the ulcer was suspected, the method of infection being divided between the dentist and a "trip down the row," to which the patient confessed. The ulcer did not heal under various applications, but did get smaller and harder and was still present when the roseola appeared nine weeks after the extraction of the tooth. Then, under constitutional treatment, there was a rapid healing of the chancre, which, previous to the appearance of the cutaneous eruption, had become similar to an ulcerated mucous patch.

Case 2, January, 1901.—Also a miner, who came to the city for the treatment of an ulcerated tooth, the major portion of which had been removed some six months previous, and which had for a week been painful and swollen. The remaining piece was removed, but the gum did not heal and he came to the medical college two weeks later. He admitted having smoked at times, for a month before coming to town, the same pipe as was used by his partner. At this time, viz., two weeks after extraction of root and three weeks after noticing a sore gum, there was a linear ulceration along the edge of the gum at the side of the upper, right, second molar; very little tenderness, shallow, no infiltration of base and a yellowish line along the edges. The first patient being still under treatment, this one was at first suspected of being similar, although glandular enlargement was very slight and the ulcer healed under the use of silver in two weeks. One month later the man returned to the clinic with the site of former ulceration presenting the fungating appearance of an ulcerated mucous patch, also others upon the tongue, together with a faint macular rash of the skin, which ten days later was well marked. There was no other sign of a possible primary lesion.

Case 3.—The following was possibly a chancre of the tonsil. Mr. X., known to author for several years, morals reasonably good, gives the following history: On April, 1904, there appeared a rash on face, body and legs. Previous to this he had been under treatment for deafness of the left ear, during which time he had developed an ulcerated tonsil, which while not very sore, was slow to heal. In the latter part of May following he presented a small papulo postular syphilide of face, and especially legs. He said that he had been taking some homeopathic blood medicine, and it did appear to be a mixed specific and iodide rash. There were two mucous patches in the mouth and post cervical glandular enlargement. A thorough search failed to show any sign of a chancre. All lesions rapidly cleared up under anti-luetic treatment, except the stains upon the legs, which are unusually marked upon the very white skin.

Will now report two cases of chancres of the female breasts, with photographs of one of them.

Case 4. July 18, 1897. Mrs. P., 27, three children, presents a typical hard chancre upon each breast, contracted from nursing "a neighbor's baby which died when seven weeks old and had crusts and scales all over it and looked like an old man"—her own words. The chancres appeared two months after having the infant to breast. Neither her eight-months-old child nor her husband have become infected, although there is a well marked papular syphilide upon body and mucous patches in her mouth, vulva and on her breast. She suffers from fever, headache and dizziness. She ceased nursing the child after the sores appeared; just how long she nursed the baby the notes fail to show.

Case 5. October, 1900. A beautiful woman, age 25, grass widow. Having accidentally met her one day and noticing a mild rash on her forehead, jokingly asked her if she had the measles. She said she had tried to see me that day, and then gave the following details: For several days she had had a cold in the head, and after a warm bath the rash had appeared. On examining her face and chest she did seem to have the measles, but there was something wrong with the character of the rash, and she was requested to come to my office the following day. While her social position was fairly good, there was reason to suspect that she was no relation to Caesar's wife. In the daylight and a thorough examination of body there was found under the right breast a small, flat ulcer, partly healed and covered by a thin, black crust. This, she said, had been present for several weeks; she did not know how long. The edges were hard and it was painless and two enlarged axillary glands could be felt. On her wrists were several characteristic papules of syphilis; there was no sign of any genital lesion and the mouth was clear. So like measles was the rash that we waited for several days. The patient, who had been a nurse, had suspected the possible nature of the disease from the line of the examination and questions asked and had said that if the sore was a chancre she knew from whom she had contracted the virus. The subsequent history was a full development of the rash and mucous patches, with a papular syphilide which returned at times for two years, especiallv if she painted in oils.

The following three cases present the initial lesion upon the lips:

Case 6. September, 1899. Well marked chancre on right side of lower lip, present six weeks; small papular rash on body and numerous patches on tongue. No special history of the mode of infection.

Case 7. Miss S., age 20, seen in consultation with Dr. Nickol Smith of Los Angeles. Indurated ulcer, size of a quarter, on upper lip, painful to touch, and bleeds easily; both submaxillary glands enlarged, roseola just appearing on chest and arms, infected probably by kissing. The girl was very nervous and hysterical, had headaches and was pale, so besides being warned against allowing any one to kiss her, little was said to her at the time.

Case 8. March 6, 1905. Mrs. R., age 35, widow; seen in consultation with Dr. La More. Chancre size of a dime in center of upper lip; said she had a cold sore there for six weeks which never healed. Both submaxillary glands enlarged, ulcer hard and painful, is dizzy, pale and has headaches, no rash. One month later Dr. La More 'phoned me she had a well defined syphilide.

The two following cases are almost genital and are reported to show the photographs and the peculiar size and location of the ulcers, the manner of infection, etc.

Cases 9 and 10. The photographs only are shown, as the notes have been lost. You see by these that these men have large oval ulcers presenting all the clinical signs of a chancre, situated just above pubes. The meeting of these two hoboes at the time the photographs were taken was unique, their remarks vivid. No questions on my part were needed to establish the fact that both had become infected from the same source in the same manner.

Case 11. Age 25. F. W. B. consulted me on

the 4th day of October, 1906, and, strange to relate, presented almost the same appearance as cases 9 and 10, both as to size and location of lesion. Owing to this man's intelligence, he being a traveling salesman, I began to hope that here I might find an explanation of the manner in which the virus had become inoculated, but he was unable to give any information except to say that he remembered that about the time of exposure there was a certain amount of irritation in this region, and he had indulged in scratching. The lesion was four inches above the Poupart ligament and slightly to the left of the median line, oval in outline and about one-half inch across. It had appeared between three and four weeks after exposure. Full secondary manifestations were present.

Case 12. Age 33. J. A. S., an advertiser, came to my service at the Medical College Dispensary December 11 with a history of having had for the past eight weeks a slowly enlarging ulcer in the right ear; this ulcer had begun within the external auditory canal as a small pimple; previous to its beginning he had not been under the care of any aurist, consequently we may eliminate infection from an ear speculum. That he had been exposed in the usual manner about this time he did not deny, but this was the only primary lesion that could be found. At present he has a hard indurated ulcer completely encircling and closing the external auditory canal and spreading around this aurifice nearly an inch in all directions, and apparently causing the cartilage of the ear to assume a cracked stellate arrangement with a rather free discharge and swelling of the ear in general. There is also a very decided enlargement of all the anterior-sternoid glands, extending well down the neck. Two weeks ago there appeared a general maculo-papular rash over the face and body. The mouth is clear, general health good with the exception of deafness in this ear, otherwise he presents slight symptoms of the ordinary secondary constitutional disturbance.

Disappeared from sight until April 7th last, when he came to my office for treatment of ulcerated lesion on forehead above left eye, the size of a quarter of a dollar.

Case 13. In February, 1906, there appeared at my clinic a boy of 16 years of age who presented upon the anterior and inner surface of the upper third of the right thigh two large oval ulcerations about three-quarters of an inch in their longest diameter. These lesions had appeared without any appreciable cause so far as he knew. They presented all the characteristics you would naturally expect for chancres in this location. He did not deny a possible exposure. They were recognized and treated as such, except that no constitutional measures were resorted to until after the appearance of a secondary rash, which occurred about seven weeks after he first noticed ulcers.

Case 14. Some time ago I saw in consultation a patient whose work brought him in contact with dead bodies in post-mortem rooms. He gave a history of having assisted in the performance of a post-mortem upon a man twelve hours after death by violence. He wounded his finger, and there occurred septisaemia, with, however, the formation of an ulcer, which was very slow to heal. This ulcer I never saw, for he came to me after it had healed, and at the time of the appearance of a papulo eruption on the chest, abdomen and arms. He also had at this time right axillary enlargement and the submaxillary glands also. I have never been able to find out whether the individual upon whom the post was performed had syphilis or not. The patient stated that so far as he knew there had been no other method whereby he might have become infected. I would like to know from members of the society whether they have ever known of an infection positively from a dead body.

TABES AS IT PRESENTS ITSELF TO THE GENERAL PRACTITIONER.*

By H. C. MOFFITT, M. D., San Francisco.

Tabes, like diabetes, chronic nephritis or exophthalmic goitre, may knock first at the door of the clinician, the surgeon or the specialist. It wears many masks besides the one of Hutchinson, and, in my experience, too often passes unrecognized. Those who have opportunity to observe, over long periods of time, patients infected in earlier years with syphilis, will appreciate what Fournier aptly termed the "initial polymorphism" of tabes. Not enough attention is given, as a rule, to analysis of the subjective symptoms of a patient. Pain, even indefinite peculiar sensations that can with difficulty be put into words, are often hints of beginning organic disease. The inetrcostal neuralgia or sciatica of yesterday becomes the initial pain of tabes in the light of the more careful analysis of to-day. The lessons of tabes, like those of brain or spinal tumors, of exophthalmic goitre, of parathyroid disease, of osteo-arthritis should teach due caution in the use of such labels as "neurasthenia" and "functional disease."

No one at this day should confound typical pains of tabes with rheumatism and sciatica, and yet the mistake is constantly made. Lightning pains frequently come in definite attacks, and are often influenced by weather. In a man seen recently, severe pains followed each rise of temperature occurring in the course of his chronic pulmonary tuberculosis. A man seen some years ago had typical leg pains following attacks of pain in the stump of an arm amputated years before. As in many painful stumps, the pain was referred to an absent hand that, as time went on, came nearer and nearer the stump. Finally, after a particularly painful spell, the hand seemed to join the stump, there were no subsequent attacks of stump pain and, more curious, no recurrence of lightning leg pains.

In four of my cases an intractable recurrent intercostal pain has been an early symptom. Ulnar pain and paresthesiæ have become, since Charcot's time, of great import. Cutaneous hyperesthesia may take the place of pain, and purpura or herpes may follow the track of pain.

A man seen in 1900 had for four years suffered terribly from trigeminal neuralgia. This had been bilateral—a fact almost sufficient to rule out true neuralgia—but was worse in the left upper jaw. All the teeth had been pulled two years before, leaving an open ulcer, and the jaw had been twice operated upon. The tabes had not been recognized because not suspected. In a woman seen five years ago, trigeminal pain and loss of many sound teeth had been an early symptom. The severe—even terrible—trigeminal neuralgia of tabetics is post-ganglionic, and operations do not relieve; in a man

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seen some years since, the pain still persisted after the Gasserian ganglion was removed.

Migraine first starting in adult life has, since Charcot, been rightly regarded with suspicion; it may be the first warning of organic nervous disease. I remember two cases in which this symptom alone called attention to the underlying tabes.

Lightning pains frequently precede or follow, or alternate with visceral crises. Gastric crises may be marked by pain alone, by vomiting or even nausea alone, or—the usual event—by both vomiting and pain. They may long precede other symptoms, and are commonly misinterpreted. Three years ago a young man was seen with typical recurrent stomach crises referred to tobacco poisoning. Last year the usual label "bilious attacks" was affixed to marked attacks that began and ended in the characteristic sudden way. The attacks may follow errors in diet or an alcholic bout, as in a case seen recently, but usually no such influence can be traced, though Roux divides gastric crises into those purely nervous and those due to coexisting dyspepsia.

The enthusiasm for gastric surgery has opened new pitfalls for the unsteady feet of the tabetic. This year I was consulted as to the propriety of a second operation on an obstinate stomach that had failed to be relieved by a gastro-enterostomy done two years before in Chile. The pain and vomiting that had led to the diagnosis of gastric ulcer had recurred shortly after the first operation, and adhesions were now suspected. There had never been true ulcer symptoms, the stomach between attacks was normal, and there were many signs of tabes. In a young man seen last year, gastro-enterostomy had been done some months previously for perfectly typical crises thought to be due to ulcer. No relief had followed, and ataxia had developed quickly after operation. In a case now under observation, the right kidney had been regarded as the cause of the recurrent abdominal pain and vomiting, and had been sewed in place a year ago. The gastric crises have not in any way been influenced.

It would be interesting to note the incidence of gastric ulcer in tabes. I have never seen a case. It must be remembered from the reports of Mathieu, Marie, Free, Straus, Lerat and Neumann that hemoptysis may occur in crises; Straus draws analogy with the ecchymoses that occur after attacks of lightning pains.

The influence of tabes on the pain of organic abdominal disease should be noted more frequently. I have seen cancer of the greater curvature of the stomach, also cancer of the colon run a course without pain in tabetics. A case of pyelonephritis seen last year went to autopsy without causing local pain. Some years ago there was under observation a man of 40 with advanced tabes, extensive trunk analgesia and recurrent pyonephrosis on the right side. With blocking of the ureter, there would be chill and temperature, no local pain but a storm of pain in the legs; relief would promptly follow discharge of the pus by the ureter after the condition had lasted three or four days.

Senator has recorded the cessation of crises for at least considerable time after nephroraphy, but certainly the cases must be few that offer any hope of relief by surgery. The enteroptosis so frequently found in tabetics is as well borne, as a rule, as the flat foot and the results of lax ligaments elsewhere. At times an abdominal bandage will relieve distressing flatulence and tenesmus.

Intestinal as well as gastric symptoms may be misleading. In a young man seen two years since, a peculiar obstinate diarrhoea that had resisted medication for over a year was the only symptom. There had been a syphilitic infection ten years before, the pupil reaction to light was nearly absent, and one knee jerk was difficult to obtain. In a man of 35, tenesmus with passage of four or five small stools daily had been the chief symptom for four years. A year after this began, there was bladder hesitancy and two years later onset of gastric crises. In four instances I have noted symptoms much like those of colon carcinoma. The patients have chief distress early in the morning. There is distention of the abdomen, moderate pain along the transverse colon, desire for stool several times repeated with passage of a little fecal matter, mucus or gas, and at times distressing tenesmus. In a man of 55 seen first three years ago, there was severe pain in the region of the hepatic flexure, tenesmus, attacks of sudden bloating and vomiting, and occasionally, during subsequent years, occult blood in the stools. There has since developed a zone of hypalgesia over the site of the recurrent pain, and the light reflex has been lost in both pupils during the past year.

Laryngeal crises are rare and, from my experience of four cases, usually misinterpreted. A woman of 31, infected with syphilis ten years previously, had what was called whooping cough four years before consulting me. The "pertussis" lasted over a year, and then the spasmodic attacks changed in character. Spells of cough would come particularly after laughing. There would be prickling in the larynx, then a severe paroxysm of brassy cough. If able to take a long breath and to keep from swallowing, the attack could be averted. If she swallowed, however, the throat frequently shut in spasm, there was a long stridulous inspiration, and several times she fell unconscious—the complete picture of laryngeal ictus. Attacks were irregular, without pain, and seemed to be precipitated by nervous worry or strain. If the interval between was long, the succeeding attack was always more severe. After the so-called "whooping cough" had lasted a year, occasional bladder incontinence would follow severe cough, but it was not until the third year that typical lightning pains made their appearance in the lower extremities. Examination showed the classical signs of tabes.

A man, under observation for three years, has se-

vere paroxysms of cough alternating with storms of lightning pains. A second man has had four attacks of sudden laryngeal spasms with unconsciousness in the past three years. He has bilateral sciatica of a typical character, and is undoubtedly in the initial stage of tabes. A third man, 36 years old, was seen in March this year. Nine years ago the left pupil suddenly dilated to twice the diameter of the right. He paid no attention to this nor to attacks of pain in the legs, which had recurred during the pasr four years, but had come seriously to consider severe spells of cough that tormented him frequently for over a year. The paroxysms would begin with tickling in the larynx, then followed a brassy cough, then belching, marked inspiratory stridor, numbness of fingers and toes, dizziness, and loss of consciousness for a few seconds. The man had typical tabes, a pulse of 140, inspiratory stridor and intense cyanosis on lying down. There was absolute paralysis of the abductors of the cords, and any effort caused marked dyspnea. Such a patient is in imminent danger, and should be advised to have tracheotomy done at once. As may be seen, laryngeal are of much graver import than gastric crises, though, like these, they may at any time suddenly cease. Death may occur in an attack even without previous paralysis of muscles. The paralysis of laryngeal muscles may be ephemeral, as is the usual case with tabetic eye muscle paslies, but as a rule they are more stable. Spasmodic cough in a syphilitic patient should raise suspicion of either aneurism or laryngeal crises, and should not too hastily be labelled pertussis. Symptoms of diaphragm irritation are not infrequent in laryngeal crises, and paroxysms of hiccough may occur in tabes. I remember one man tormented at intervals of weeks with hiccough lasting hours and days. A man seen lately with aneurism of the aorta has had four or five almost fatal attacks of hiccough during the past two years.

Some years ago I showed to the Society a woman with a Charcot hip joint, who had been advised to have the right femur enucleated for sarcoma of the femur. While in Vienna, Kolisko demonstrated two lower extremities that had been amputated through mistaking Charcot joints for sarcoma. At the same meeting, I showed the plate of a femur fracture that had healed with a great callus. The fracture had come without pain in a young man who simply turned around suddenly while running; tabes had not been recognized.

Mention has been made above of *mal perforant* occurrying in the mouth. *Maux perforants* may occur in many unusual situations, but are commonly in the feet. They are by no means rare, and may occur as an early sign. Like other trophic changes, as Buzzard first indicated, they seem to occur more frequently in cases with visceral crises.

Some months ago I had ready to demonstrate two cases of spondylolisthesis of tabetic origin and, though these trophic lesions of the spine are very rare, I have seen three in the past two years. The dorsal deformity in one man was thought to be tubercular, though the complete absence of pain should have demanded examination for tabes. You can see from these plates how great are the destruction and overproduction of bone. In two instances seen lately Pott's disease has been wrongly labeled tabes on account of the marked ataxia and the failure of knee jerks. Local vertebral pain and tenderness, and palsy of the lower extremities should prevent confusion.

At times, trophic lesions are of uncommon kind. Some years ago, a man from the country was seen with sole complaint of recurrent swelling of the right leg at intervals of weeks or months. The affection was labeled angioneurotic edema, until in later years typical pains and signs of tabes developed. A few months ago, a young man was seen with exactly similar symptoms. Marked swelling of the right leg with redness but no pain would come on without cause at intervals of almost eaxctly three months during a period of two years. For two years now, the swelling has persisted, and a year ago a perforating ulcer appeared on the dorsum of the foot. There are the usual signs of tabes with marked sensory changes in the right foot.

Gangrene of the feet is not an unusual feature of long-standing tabes. Two years ago a man of thirty-five was seen with gangrene of the left foot, without other symptoms, but signs of tabes were present with marked changes in the peripheral arteries.

In one of my cases of trophic ulcer, early symptoms were the great heaviness and apparent weakness of the legs that so commonly bother the tabetic in later stages. Muscle atrophies and personeal palsies are rare symptoms.

Long chapters could be written on the eye changes in tabes. It cannot too often be emphasized that the commonest cause of eye muscle palsies is syphilis in direct or indirect way. From the history of many tabetics, transient diplopia is an early symptom, and may precede more obvious changes 5, 10 or even 20 years. It is a symptom that must be asked for, as the early palsies are nearly always ephermeral. A woman, now under observation, was seen some months ago with view of passing judgment on a proposed appendix operation. There was frequently dull pain in the right hypochondriac and iliac regions, but in this zone there was definite hypalgesia, there was a large liver of doubtful origin, and it was learned that her husband was a tabetic. In the past month there was diplopia for a week, and the syphilitic origin of the entire affection seems definitely established.

The pupils give invaluable proof, not infrequently, of doubtful questions. An Argyll-Robertson pupil alters at once the view of an obscure persistent neuralgia, determines the origin of an insidious aortic insufficiency, helps in rational treatment of an enlarged liver, early arteriosclerosis, some cases of myocardial insufficiency. For practical purposes an Argyll-Robertson pupil always means syphilitic infection. As noted by many writers, it is not always easy to decide betwen cerebral syphilis and tabes. I have seen the reaction to light return

in two cases of pseudo-tabes under energetic specific treatment. Failure of both light and convergence reflex is always of more favorable outlook than the true Argyll-Robertson pupil. In a young woman seen last year, the diagnosis of syphilis of the liver was strengthened by a beautiful paradoxical pupil reaction,—the sudden and persisting dilatation of the pupil on illumination—and later confirmed by results of treatment.

There is little need of calling attention to the importance of fundus examinations to the general practitioner as well as to the nerve specialist. Optic atrophy and changes in the visual field may be the first signs of tabes. It has not been my experience, contrary to the ruling opinion, that the cases with optic atrophy run more slowly the gamut of other tabetic symptoms. Even advanced atrophy may escape the notice of the patient: a young man seen two years ago first knew of trouble when out riding —a piece of dirt suddenly closed one eye, and he was astonished to find he could not see with the other. It is of great moment at times to distinguish between the primary tabetic and secondary atrophy in differentiating tabes from the so-called pseudo-tabes of cerebrospinal syphilis. The onset of cranial nerve symptoms with headache or persistent neuralgic pain and the presence of neuro-retinitis would suggest, of course, cerebral syphilis and not tabes. We must remember in considering prognosis, however, that cerebrospinal lues may usher in tabes, and also that specific meningitis or gummata may develop in the course of tabes.

Even the superficial study of eye changes that can be made at the bedside will have a salutary influence in limiting the frequency of diagnosis of "purely functional disease," and I can not too strongly insist upon the necessity of routine use of the ophthalmoscope in private work.

To the specialist in genito-urinary diseases will come the numerous tabetics that Guyon has happily termed *"les faux urinaires."* Not a few patients first complain of failing sexual power. Fournier mentions the occurrence of emissions, particularly their frequent repetition, as an early symptom. In one of my cases, there would occur regular crises of emissions followed, as is frequently the case in the analogous clitoral crises, by most severe attacks of lancinating pains.

Bladder symptoms, retention, and even *slight* incontinence must not be dismissed lightly, though the patients lay little stress upon them. Failure properly to empty the bladder is common, and it is not unusual to find large bladder tumors in examining tabetics who maintain they have no trouble with micturition. A tabetic's future depends largely on the state of his bladder, and too much care can not be taken with the catheter. Pyonephrosis and pyelonephritis are not rare events. Some four years ago I saw a tabetic who was supposed to be having a relapse of typhoid. There had been temperature for three weeks, which had gradually come to normal only to begin anew after three or four days. The patient was a tabetic who had long had cystitis demanding irrigation, the temperature was of septic type, and examination showed a large sac in place of the left kidney. Nothing could be done through the ureter, and nephrectomy was successfully accomplished, the wound healing well. Last year a man with recurrent chills, fever and sweating was sent me with the diagnosis of tubercular cystitis. He had typical tabes with foul cystitis and evidently, from the paroxysms of chills and fever, pyelonephritis. The bladder was shrunken and deformed, and no successful examination of the ureters could be made. The right kidney was very long, large and soft—the left apparently of normal size. There was absolutely no pain and no tenderness of kidneys or of testicles. The large kidney was thought to be the one diseased, and was exposed by a lumbar incision. It was pale, soft, and bled profusely on section, but was not diseased. The patient's condition forbade the exposure of the left kidney that had been contemplated, the wound became gangrenous, and at autopsy the left kidney was found presenting advanced stages of pyelonephritis. Clinical acumen should have suggested that the enlargement of the right kidney was perhaps compensatory. The kidneys of tabetics can, as a rule, be readily palpated. They have seemed to be frequently unusually small and soft—unlike the ordinary floating kidney.

Tinnitus and vertigo at times torment the tabetic over long periods of time. In a woman with incessant complaint of tinnitus, the history of three miscarriages and the demonstration of a sluggish pupil reaction to light and of absent Achilles jerks prevented a mistaken diagnosis of neurasthenia. A man of 40 had sudden onset of vertigo four years ago on looking down from the City Hall dome, and for two years could not go on the street unattended. In two cases initial symptoms have been peculiar confusion and terror in recurrent attacks that resemble those not infrequently observed in cerebral lues. Transient aphasia, tachycardia or sudden abdominal distention with belching may accompany the seizures. In a woman with gastric crises and many signs of the spinal type of tabes, there have been three attacks of transient hemiplegia during four years.

Many interesting questions in regard to tabes can not here be considered—*Die Ersatz Theorie* of *Edinger,* juvenile tabes, the descendants of tabetics, the incidence of late syphilitic lesions in tabes, the prognosis in different types of the disease, the causes of death in tabetics. It is well to remember that the disease is common in our community, that it is of interest from eminently practical reasons as well as affording, to quote Gowers, "a useful example of pathological reasoning and of the mode by which we discern the mechanism by which symptoms are produced."

Discussion.

Dr. Sherman: Dr. Moffitt's report of hematemesis as one of the phenomena in a gastric crisis is interesting because I have made the fact of the absence of hematemesis a differentiating point to

suggest looking for tabes and not to do a gastroenterostomy rashly. I have had two or three patients sent to me, one definitely for a gastroenterostomy, and have found tabes and so have avoided the operation. One must look for tabes in every case of a man who seems to present conditions calling for a gastroenterostomy. A curious thing in connection with these patients is the fact that they very frequently do not know, or else they have forgotten, that they had syphilis. One would think that an individual who had a chancre and who even made of it an entry in his diary, would remember that fact; but I have been recently told of a patient who did this very thing and completely denied that he had ever had the disease. Later he developed paresis, and the diary with the record fell into the hands of his physician. It seems to me in this, as in the case of tuberculous joints in children, we have to disregard the history of onset and development of the disease and be guided chiefly by the clinical symptoms. These we know can never lie, though they may be misinterpreted.

Dr. Power: From the standpoint of the general practitioner, the great interest in a paper like this is the strong accent it places upon the need of more careful and routine examination in every case coming into our hands. Men having the opportunity of going over the work of others often find mistakes, not always from lack of knowledge, but mostly from want of observation. When dealing with a disease like tabes you must expect constant errors in diagnosis unless the general practitioner abide by the rule that every case has to be investigated quite independent of any particular complaints the patient makes. It is only in that way that we can avoid errors. So far as I can see, where surgical mistakes have been made, they would not have occurred had the cases been submitted to complete examination for other lesions. Tabes gives rise to every kind of symptom—atrophic, organic and neurotic. We must make the general rule of going over all cases thoroughly and of paying special attention to eye symptoms. It is safe to assert that in the practice of most of the men in this city, certainly not more than 10 per cent use the ophthalmoscope, yet it is of great importance.

Dr. Krotoszyner: The following case will best illustrate the initial symptoms of tabes starting in the urinary organs. A few days ago a man of 43 presented himself at my office suffering from difficulty in urination. He had to wait a little before urination began and had to press hard in order to start the act of micturition. The condition had deteriorated lately. The history of the case elicited only one fact, that a surgeon in the East, after a careful examination, had pronounced his complaint as being caused by a large prostate. The palpation of the prostate per rectum proved the gland not to be enlarged. The urine was clear and did not contain anything of pathological note, either chemically or microscopically. No stricture. The cystoscope showed a trabecular bladder in its initial stage. There was also noticeable an absence of the reflex of pain which is generally present when a steel instrument passes the sphincter. Upon these findings, I suspected tabes and upon a general examination my suspicion was substantiated. Upon close questioning the patient admitted having had a chancre 25 years ago and which was only treated casually and for a short time. I have seen six similar cases with the initial symptoms of tabes diagnosticable by the bladder. The majority of these cases had been treated for so-called bladder trouble for years with local applications, bladder washings, etc., while the etiological factor of the bladder affection was not recognized. In this connection it is worth while to relate the case of a young married man of 33 who had been treated for over two years for so-called prostatitis and whose infection of the bladder was so severe that a left sided pyonephrosis ensued, necessitating nephrectomy on that side. Since the removal of the left kidney and a general symptomatic treatment for his tabes, the patient has improved materially. Another case of initial tabes starting in the bladder was that of a man of 40 who presented himself with such severe pains in the bladder that I suspected a calculus. In this case the bladder soon became paralyzed and showed the symptoms of a paradoxischury. The urine dribbled away just like from a vessel filled to overflow. This patient was very much improved by general and local treatment. One of the most frequent complaints bringing the tabetic with bladder symptoms to the physician is the slowness and difficulty to start the act of micturition. This should be borne well in mind by the general practitioner in order to enable him to make the correct diagnosis and to institute proper treatment.

Dr. Welty: I wish to call attention to the laryngeal manifestations that sometimes present themselves. Dr. Krause, of Berlin, claims to be able to make a diagnosis of tabes dorsalis by the laryngeal picture. Of course this is not true in every case, but while I was there he had five or six cases that showed a picture of true tabes dorsalis. In these cases the laryngeal symptoms made their appearance prior to any other manifestations that the patient was aware of. Furthermore, we have a complete paralysis of both cords which will leave the patient in such a condition that he is liable to suffocate at any time. In such cases tracheotomy should be done unhesitatingly and done at once.

Dr. Nagel: Dr. Moffitt has mentioned some of the main eye symptoms in tabes. I should like to add a few remarks concerning the same, insofar as they may be the initial symptoms of the general disease. Regarding palsies of the external muscles, the doctor has pointed out their passing character, and it is very important to bear this in mind and not to attribute the trouble for that very reason to "rheumatism." With regard to Argyll-Robertson's symptom, I should like to point out that the refractory way the pupillary test for direct light-reaction is often made in diffuse davlight is, of course, quite insufficient to prove absence of reaction. The best

method, in my judgment, is the one practiced by Uhthoff. Under exclusion of its fellow, you direct the eye to be examined to look into the artificial light in the dark room, then shade off the eye with your hand (enjoining patient not to move his eye) and now, wtih a strong convex lens, throw suddenly the inverted image of your light upon the cornea, which image the eye is absolutely unable to accommodate for. You are thus stimulating with the utmost amount of light the most sensitive part of the retina with accommodation absolutely at rest. We can in this way prove absolutely eventual absence of direct light reaction, and only such is of value in those cases where there are no other symptions of the disease yet. otherwise a diminished pupillary reaction may be of importance. Finally, with regard to optic atrophy, I should like to say, that when such is discoverable with the ophthalmoscope a diminished central form sense is almost always present also. But since optic atrophy may precede other symptoms by decades, it is very important to diagnose it earlier, viz., by perimetry. You may find a general retraction of the field of vision; a finer test is examination of the fields for colors, and by varying the intensity of light you may eventually find a restricted field for red, and especially for green, very early.

Dr. Moffitt, closing discussion on his paper: With regard to what Dr. Sherman has said, we have to hunt up the syphilitic infection in these patients. The history is very often denied, or it is often forgotten, or the patient never knows that he has had it. A sign that appears not infrequently in tabetics that helps considerably is the recurrent herpes that some of these people have on the penis every few months. I have at least four tabetics, who ever since the infection have had outbreaks of herpes, always on the same place on the penis. I have come to regard it of decided use in strengthening the suspicion of diagnosis of syphilis. In the eye we should hunt not only changes of the pupil, atrophy of the fundus, but also minute changes in the retina and choroid. I have become impressed with the necessity of hunting not only in the patients themselves, but in the relatives. In young people with indefinite nerve symptoms we should go into the history of congenital lues. Here again the eye helps us out. I had hoped that Dr. Sherman would say something about operations on the nervous lesions in tabetics. I have in the hospital now a woman on whom Dr. Sherman operated for obstinate pain and muscular spasm in the left leg. He removed a part of the external popliteal nerve. This had no effect on the pain because the pain was central. It has had no influence on the tic. The muscular spasm has extended to other groups of muscles. In operating on the stomach in tabetics, I do not believe gastro-enterostomy is going to do good in the pure gastric crises. It may be advisable to do minor operations. We can relieve some of the infections by proper treatment. I have had mouth and throat infection treated with good effect on the general health. We should not overlook cases that can be remedied by surgery. There is often difficulty in making out organic disease in the abdomen of the tabetic. The surgeon should take particular care about the healing of wounds,—sometimes they do not heal at all and become gangrenous. I agree and disagree with Dr. Grosse. I do not believe we can be too careful in distinguishing true tabes from the pseudo tabes of cerebrospinal syphilis. I have now a man under observation whom I thought had very definite lesion-tabes. He was interesting because the gall bladder exploded without particular premonitory symptoms and Dr. Rixford operated in time and saved his life. That man, whom I regarded as a tabetic, came back to me after two years, and careful examination of the eyes showed that he had, instead of the ordinary fundus, a very definite optic neuritis in one eye. The tabes had not advanced and I gave him the ordinary syphilitic treatment, under which he got a great deal better. Dr. Welty brought up the question of laryngeal crises. In case of bilateral palsy with dyspnea, the proper thing is to do a tracheotomy at once. We have cases on record to show that after trancheotomy has been done the laryngeal palsy may recede.

SURGICAL TREATMENT OF MOTOR ANOMALIES OF THE EYE.*

By B. F. CHURCH, M. D., Los Angeles.

The diagnostic requirements and surgical exactness necessary in operative measures upon the extrinsic muscles of the eye are not exceeded in the realm of surgery.

Anomalous as the statement may at first appear, an external or an internal squint may have no connection whatever with faulty action of the lateral recti muscles, the causative effect being found wholly in the verticle, especially the superior recti. Also hypertropia, even with excessive upward rotation of the eye, may be the result of a faulty insertion of an internal rectus, and not to an overaction of the superior muscle.

Empirical or exploratory methods of operating have no place in surgery of the eye muscles. We must know, beforehand, the muscle, or muscles, that are at fault, and leave them in full possession of their physiological functions.

Exceptions to empirical surgery, or operating upon the muscles directly in line of the deviation, are those of high amblyopia and in which diplopia cannot be obtained.

A moderate tenotomy of the immediate deviating muscle may be performed, not to the extent of correcting the deformity, but as an aid to further positive investigations.

Great credit is due Stevens for his painstaking investigations of motor anomalies of the eye muscles, especially for his demonstration of the relation and close association of declinations of the visual axe with heterophoria and strabismus.

On the surgical treatment of the eye muscles Stevens[1] says: "The great principle which should guide in all the surgical treatment of the muscles of the eyes is that all the functions of movement should be made more perfect and more harmonious after treatment than before.

"Esophoria and exophoria are rarely primary conditions. If the case, for example, is one of esophoria, it does not follow that the inner muscles are too tense or that the outer muscles are relaxed. The cause of the esophoria may lie in the fact that the optic axes are normally above the plane of the horizon, or, much more frquently, in the fact that there

*Read at the Thirty-seventh Annual Meeting of the State Society, Del Monte, April, 1907.

1 Motor apparatus of the eyes. Stevens, 1906.

are such declinations as to make a nervous impulse toward convergence a part of the adjustment for parallelism of the vertical meridians. These and other important considerations are to be carefully weighted in every instance and treatment directed,, not necessarily or generally immediately against the most conspicuous heterophoric tendncy, but against the inducing conditions from which the conspicuous tendency arises."

In the consideration of operation measures for exophoria Worth[2] places great stress upon the necessity of observing the state of the dynamic convergence for near points. He advises against operation when there is an insufficiency of convergence, or, as Stevens expressed it, an exophoria in accommodation.

Stevens, on the other hand, claims that insufficiency of convergence is of no practical significance, excepting its slight value as a collateral test; that the condition is variable and may change from day to day, and does not represent the adjustments of the muscles.

The belief that a tendon, when severed from the globe and permitted to fall back, will form a secure attachment in its changed position is erroneous. It is probable that firm attachment never takes place. The tendon holds for a variable time, but almost exclusively by its lateral attachments. We cannot feel sure of our ground after a complete tenotomy, however skillfully performed. A correction of a deformity today may result in a more noticeable and intractable one as time passes. A rule ever to bear in mind, when operating upon the tendons of the eye, is to never destroy or seriously impair the functions of a muscle.

In high degrees of squint, with no hopes of binocular vision, or in some conditions of paralyses, it may be necessary to resect a part of the tendon. This is best performed with Prince's forceps, after the method of Worth, resecting a portion of the tendon, capsule and conjunctiva, bringing them forward and anchoring at the required position.

Recognizing the close association of accommodation and convergence, the splendid results which sometimes follow the correction of refractive errors, especially in cases of esophoria and convergent squint, observation abundantly proves the existence of causes other than refractive errors. The first and most important principle to recognize is that the etiological factor does not lie in an overaction, or an underaction of the opposing muscles. It is well known that excessive abduction and insufficient adduction may be present in convergent strabismus, and vice versa in the divergent form.

The cause for the heterophoria or heterotropia may be a lack of development of the fusion sense in the brain, withholding the normal stimulus for binocular vision; formation of the orbit to cause the visual line to be above or below the normal, faulty attachment of the lateral fibers of muscles, or an unequal plane of the visual axis of the eyes.

Rational surgery of the eye muscles for heterophoria cannot be performed until the presence or absence of all these conditions is absolutely known.

Convergent squint, although in appearance is a direct turning of the eye, has, as a general rule, more or less of a verticle deviation, an excessive upward rotation of the squinting eye. This condition will be found in a large majority of cases, and, not infrequently, surgical means directed to the verticle muscles, preferably the superior rectus of the deviating eye, is all that is required or is desirable for a correction.

This inequality of the tension of the verticle muscles is also a very potent cause of divergent squint.

In a report of 200 cases of strabismus, reported by Stevens, it is shown that hypertropia, a deviation of one visual line above the other, is the principal causative element in 24½ per cent of them, an important factor in more than 50 per cent, and is present in practically all cases of concomitant squint.

Leaning of the image of one or both eyes is almost a constant accompaniment of ocular deviations.

The strongest visual impulse is that of maintaining images in an upright position. Objects not thus seen lose their equilibrium, buildings and trees appear to fall and walking is difficult.

This effort to maintain an equipoise is, in many cases, the sole cause of strabismus.

These anomalies of declination of the visual axes, or leaning of the meridians, can be indirectly effected by changing the insertion of the tendons of the superior or lateral muscles. A portion of the attachment of the tendon, in accordance with the meridian to be effected, is severed and advanced, forming an oblique insertion to the globe.

It is difficult, and sometimes impossible, to induce a strabismic patient to see the second image. Our efforts are thereby thwarted to accurately measure the deformity.

In such a case a partial correction only should be attempted, the object being to induce diplopia, a necessary condition for accurate measurements.

Presuming the deviating eye to possess a modicum of vision, the final correction should not be attempted until exact measurements are made. This is only possible when the patient can locate the two images.

Such a procedure may be slow and tedious, but the results obtained are well worth the effort.

2 Squint, by Worth.

THE OCCASIONAL FALLACIOUSNESS OF THE DIAGNOSIS OF ENLARGED PROSTATE MADE FROM DIGITAL EXAMINATION THROUGH THE RECTUM.*

By GRANVILLE MACGOWAN, M. D., Los Angeles.

To those who have acquired considerable experience in the surgery of the prostate it is very well known that the examination of this gland through the anterior wall of the rectum rarely gives any accurate or dependable information as to the situation and size of the tumors which actually prevent the

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free passage of urine from the bladder, or create disturbances in the rhythmical contraction of this vicus.

Given the symptoms of prostatism and the inference drawn from a rectal examination, which reveals a tumor in the anatomical situation of the gland, is always that the condition is one for which an enlarged prostate is responsible. In nearly every case the inference is correct. But there are exceptional instances in which the most experienced surgeons mays be deceived.

The three cases upon which I report in this writing are of this character.

Case I. J. T. B. 52, married, farmer, a citizen of Temecula, came to me May 5, 1898, with total retention.

History: From childhood had an irritable bladder. At 20 he had a gonorrhoea which was readily cured. Married at 22, and has been a person of good habits ever since. About 1890 he noticed some lessening of the force of his urinary stream and soon afterward had to rise at night to pass water. The power diminished and the nocturnal frequency increased until in 1893 he was compelled to resort to the catheter to empty his bladder, and he had led a catheter life continuously until increasing irritability of the bladder, and the desire to be relieved of the tyranny of the catheter brought him to me.

Examination: The man was wan and haggard from pain and loss of sleep, but the examination of the organs of the chest cavity and abdomen was negative. His kidneys were not enlarged or tender upon pressure. No obstruction in the urethra until the prostatic portion was reached. A soft rubber catheter would not pass into the bladder until stiffened with a stylet, and a silk Mercier required some force to enter. The bladder contained 180 cc of very purulent ammoniacal urine. The bladder base was examined through the rectum before passing a catheter and a marked bilateral smooth enlargement of the prostate noted. After catheterization a bimanual examination disclosed a tumor in the position of the prostate.

Under an anesthetic he was sounded for stone with a negative result. The bladder was irrigated twice daily until May 10th, with a 1-30,000 solution of silver nitrate, when a prolonged and careful cystoscopic examination was made. At this examination a number of physicians assisted; a demonstration of the bladder was made to the class of students, and the cystoscope was withdrawn and replaced several times.

The conditions found were those of a chronic cystitis. The image of the bladder neck showed a marked protrusion of the prostate into the field below, to each side and above, but there were no distinct nodules projecting. A diagnosis of retention from enlarged prostate was made and on May 20th, a perineal urethrotomy was made preparatory to the removal of the gland. Upon enlarging the cut in the membranous urethra with a Blizzard, which I happen to prefer always to tearing or boring these tissues with the finger, there was a sudden gush of pus and debris. Upon following the knife with my finger it entered a hole in the anterior margin of the prostatic capsule which had been made by my knife cutting on the bottom of the urethra, and one by one I withdrew a large number of faceted phosphatic calculi, some of which easily crumbled.

Upon sweeping my finger around on both sides I found there was nothing left of the prostate except an excessively thickened capsule, which had been so tightly spanned about the abscess cavity that it had, by pressure upon the stones contained within it, completely blocked the passage of urine and accurately simulated to the examining finger in the rectum, and to the cystoscope an enlarged prostate. There evidently was some communication with the urethra for the stones were stained by methylene blue which he had been taking for a month before he came to me. There was always more or less purulent discharge from the urethra but this aroused no suspicion of a prostatic abscess, for there was no fluctuation to be detected in the prostate, and there had been no pain referable to this organ, and as the irritability of the bladder was so great that he had to pass a catheter every hour of the twenty-four the mechanical irritation of the dirty catheter was sufficient to account for the presence of urethral pus. His physician had passed sounds for him, he had been in the habit of passing sounds himself at times to "loosen up," as he called it, the bladder so that the catheter would pass more readily. I sounded him for stone as also did my assistant, and we passed the cystoscope several times without ever anything occurring to make any of us suspect the presence of these stones which lay packed all around the prostatic urethra.

Case No. 2, B. W., 37 years; laborer. Referred to me by Dr. Frank Bullard, Jan. 20, 1904.

Complaining of great frequency and difficult urination for five months. He never had previously any serious illness. At 27 and 32 had light attacks of gonorrhoea.

Examination: Testicles normal, no stricture, no enlargement of glands of groin. Bladder capacity 150 cc, residual urine 15 cc. Urine acid, specific gravity 1022, contains pus, a few red blood corpuscles, some albumen but no casts, no tubercle bacilli, but streptococci, and colon bacilli present.

By rectal examination the bladder being empty, the prostate appeared very large and nodular, the middle and upper portions seemingly projected into the bladder. There was no enlargement of the lymph glands out along the sides of the pelvis and no involvement of the seminal vesicles. It was noticed that the extreme limit of vesical distensibility was 150 cc and that upon bimanual palpation the bladder wall was thick; this was however attributed to a pericystitis; and as the patient was very anxious for the relief to be obtained from a vesical drainage no cystoscopic examination was attempted. On February 2nd I did a sectioalta upon him. As I neared the bladder the character of the tissues told of malignancy. The whole superior wall was occupied by a thick and heavy epithelioma which filled the bladder space, rested upon the trigone and felt then, as before operation, to the examining finger in the rectum, like a growth in the prostate, though the region of the trigone was not actively involved in the cancerous process, and the prostate was healthy.

Case No. 3.—Mr. R. C. M., 70 years. Nov. 2, 1906. Retired railroad officer.

For many years he has had some frequency and some difficulty in passing urine due to a tight stricture of the phallic urethra. For five months he has had complete retention and led a catheter life.

Examination: Dense stricture 16 F., extending from the meatus to a point 2½ cm posterior. Prostate feels through the rectum enlarged, but not clearly outlined, giving rise to suspicion of cancer of bladder base. Bladder capacity 900 cc; urine cloudy and full of pus. The silk catheter used gave upon entering the bladder a distinct sensation of pushing something aside. Urine acid, specific gravity 1020, cloudy and full of pus. On November 6th, I cut the stricture and examined the interior of the bladder with a Kollman cystoscope. The image of the bladder neck was very irregular and many projections could be observed about it. No definite image of the trigone could be obtained and neither ureter could be seen. No satisfactory view of the superior bladder wall could be gotten.

November 8, Sectio Alta. Upon introducing my

finger into the bladder a cavity so enormous was encountered that I thought I had broken into the peritoneal cavity, but in the anterior part of its floor I found an elliptical opening, 4 cm long by 2 cm broad, into another chamber in which I could feel the sound passed into the bladder through the urethra. This opening was enlarged, an assistant passed two fingers in the rectum and on then exploring the lower vesical cavity and the posterior urethra I found there was no enlargement of the prostate at all, either intravesical or intra-urethral. I was dealing with a peculiar vesical deformity the conditions of which had become exaggerated by the strain incident to the long existing obstruction of a tight stricture.

It was really an hour-glass bladder the ureters running diagonally across the lower wall of the septum, ending in a trigone which had gradually hypertrophied until it sagged into the vesical outlet, producing total retention and simulating to the finger in the rectum prostatic enlargement to such a degree that in the presence of the other symptoms deception was easy. The passage between the two chambers was anterior to the dip of this mass.

The operation for relief of the condition consisted in removing a section of the septum, 8 cm long by 3½ wide, so as to provide for free drainage and approximately throw the two chambers into one. The trigone was then raised, the heavy intra-ureteral bar excised, the ureters dissected out and carried to the end of the raw surface left by the removal of the septum at its junction of the lower bladder wall, a distance probably 7 cm and there securely anchored in a denuded space prepared for them. It was found necessary to resect a portion of the right ureter. The patient made an uneventful recovery. The abdominal wound leaked a very little for about ten weeks. He now passes from 180 to 240 cc of urine every three to four hours in a good stream and does not have to rise at night. He passes the catheter once a day and withdraws from 200 to 250 cc of urine.

A cystoscopic examination was made at the time of writing this report, April 15th, and a very good view of an unobstructed bladder neck obtained. The mouth of the right ureter may be seen in its new position a long way off from the bladder neck. The urine may be seen coming from the left ureter but the mouth itself not observed for it is concealed by a sag in the bladder wall.

I suppose that other surgeons doing many bladder and prostatic operations might add to this experience. But whether they can or not do so, I want these cases to go on record as illustrations that in an apparent condition of prostatism, with an apparent tumor of the prostate to account for it, there sometimes is not really a real prostatism and the tumor is not really prostatic, however much it may seem to be so from a carefully conducted rectal examination.

A FATAL CASE OF PEMPHIGUS, BEGINNING IN THE PHARYNGEAL MUCOSA.*

By M. W. FREDRICK, M. D., San Francisco.

That the mucous surfaces can participate in or be the starting point of almost all the pathological processes which arise on the general integument is such a well-known fact that it need not be insisted upon here. We have only to think of the exanthemata and syphilis to obtain a forcible illustration of our point. The trouble in recognizing the pathological processes lies in the changed appearance of the lesions on the mucous surfaces, which often makes a diagnosis difficult or impossible. This is more liable to be the case if the disease in point is a rare one and there is no concomitant skin lesion to serve as a diagnostic guide. I might soothe my diagnostic pride with the reflection that many authors maintain that a diagnosis of pemphigus, when affecting the mucous surfaces alone can not be made, but I will freely admit that I was astonished when I at last saw what I was dealing with in the following:

Mrs. J., widow, aged 68, had always enjoyed good health, and had raised four children who are in fairly good health. While there is a general neurotic tendency in the children, it is absent in the mother. I had seen the patient before for several minor things, such as the correction of her refraction, and some slight middle ear trouble, but had never treated her for anything of consequence. In October, 1904, she came to me with the history that the day before, while drinking coffee and eating a slice of bread, one of the breadcrumbs had scratched her throat. Examination revealed a long, narrow excoriation in the region of the right pyriform sinus, such as might easily have been caused by the passage of a rough body over the mucous surface, and treatment was given accordingly. She returned several days later with a similar lesion below the left tonsil, for which she could not account. At the same time I noticed a very much engorged vein crossing the right tonsil, and sent her to her family physician, Dr. Chas. G. Levison, for general examination; he reported that there was nothing wrong with the patient except a general lack of tone, for which he prescribed tonics and Nauheim baths. She came to the office on two more occasions, several days apart, with new lesions in the region in front of the tonsils. After that I did not see her for about a week, when I was asked to visit her at her home, as she was too weak to go out. I found that she had a number of new lesions on the posterior part of the tongue and on the interdental parts of the buccal mucosa. These spots suggested eroded mucous plaques more than anything else, except on the tongue; where they had coalesced, presenting a picture such as one often sees in severe cases of mercurial stomatitis, a broad, grayish patch occupying almost the entire breadth of the tongue. Eating had become painful by this time. Dr. Levison and I sought to discover the source of the trouble, without success. There was no history of lues or ingestion of mercury. Her dentist stated that he had not used any material containing mercury in her mouth. The lesions in the mouth kept growing more numerous until finally the whole mucous surface was covered. The pain and discomfort kept increasing in the same ratio, and eating was almost impossible, although free use was made of orthoform, anesthesin, and solutions of antipyrin. The etiology still remained obscure until one day, while I was calling on her, her nightdress slipped disclosing a necklace of blebs, some already dry, and some still fresh, which at once gave a clue to the diagnosis. These blebs had been present several days, but had been wrongly ascribed to the baths which the patient had been taking. The next day several blebs appeared on the lips, and the patient became hoarse, showing that the disease was extending downwards also. On the conjunctiva several small patches appeared, but not until several days later were blebs seen on the lid margin. Whether this process on the conjunctiva would have given rise to essential atrophy or shrinking of the conjunctiva could not be decided, as the process did

*Read at the Thirty-seventh Annual Meeting of the State Society, Del Monte, April, 1907.

not continue long enough in that locality. From this time on the spread of the blebs was rapid, until finally the whole body was covered, some of the blebs being two to three inches long. Even the vulva and anus were implicated, the lesions in this region giving rise to a great deal of pain. Drs. Regensberger and Montgomery saw the patient, and confirmed the diagnosis. Numerous measures were resorted to to relieve the patient's distress. Among other things she was wrapped in blankets which had been dipped in oil, but the annoyance of these was so great that she was returned to her ordinary nightclothes, and all the surfaces liberally covered with dusting powder. At last opiates were resorted to.

In view of the patient's age, of the fact that the blebs quickly became saggy and filled with pus, and, most of all, because the process had begun on the mucous surfaces, the prognosis was made infausta. This was confirmed by the patient's death taking place on Dec. 8th, about ten weeks after the first lesion had appeared. The extreme annoyance of having such an extensive area involved together with the impossibility of conveying nourishment to the patient (even nutrient enemata not being tolerated) were, without doubt the cause of the fatal ending.

This was the only case of pemphigus affecting the mucous surfaces that I had ever seen, and I may never see another, so rare are the cases. It is worthy of notice, in this connection, that my colleague, Dr. R. D. Cohn, has a parallel case to report to you at this meeting.

Having lost all my notes, I can not give exact data on this case. I know there was some fever, but I remember that it never exceeded 103.

I have seen several articles of late bearing upon the diagnosis of dermatoses when occuring on the mucous surfaces. A late number of the J. A. M. A. contains a very good article by Dr. Linn Emerson, of Orange, N. J., on the appearance of lichen planus in the mouth. If these lesions are confined to the mucous surfaces, and remain confined to that locality for years, as they do in some cases, they almost defy diagnosis. Owing to the thinness of the covering and the moisture to which they are constantly exposed the lesions present hardly anything characteristic. Moreover, their rarity makes familiarity with them an impossibility.

MYOCARDITIS: ITS PHYSIOLOGY, PATHOLOGY, SYMPTOMS AND TREATMENT.

By NEIL DONALD GUNN, M. D. C. M., Pacific Grove.

In taking up the subject of myocarditis, I do so with a certain amount of apology, as the specialist may feel that it is a well-trodden path, but the general practitioner is, after all, the final court of appeal, and to such an one this paper is especially addressed. It is a subject that embraces nearly all heart symptomatology, and when we speak of such conditions as dilatation, hypertrophy and high tension, we are but dealing with entities or signs of a general vascular condition, that condition being usually summed up in the general term myocarditis. This term is more or less a misnomer, for it not only includes inflammatory conditions but also degenerations; the fact is, the latter embrace by far the greater number of pathological changes found. When, after many years of doubt, the clinician had evolved a working hypothesis to explain these various heart phenomena, physiology departed from its beaten paths and began to blaze new trails, and in the enthusiasm born of youth and inexperience, promised to clear up all that was obscure. Time has proven how much these newer methods have yet to develop before we can with confidence assure ourselves of what is taking place in the circulatory system.

Experimental physiology began most naturally on the circulation and the various physical and mechanical forces employed in propelling blood. The various reasons why the heart beats, offered since the discovery of the circulation, would fill a paper of some dimensions, and if one were to follow the arguments in favor of each explanation, it would occupy a volume. With all due respect to the dead and the living, "that vast army of experimentalists," we are still looking for light and still presenting problems that are unanswerable. Are we any nearer the cause of the heart beat and its various disturbances that were Bright and Brestowe? It is of interest to follow the various and varying moods and tenses of this question, and only a few references can here be made to the physiological work that has been done.

When Remak in 1844 discovered the ganglion in the heart walls, he founded a school that claimed that the heart beat was due entirely to nervous influence; Ludwig in 1848 described another group of nerve cells; then Bidder demonstrated yet another. As methods of research improved, Dogiel and Gerlach showed that ganglionic cells could be found in nearly all parts of the heart; Freidlander and Schweiger-Seidl and Valkman arrayed themselves with this school. These were the founders of a school that still has many advocates.

This theory seemed to satisfy clinician, physiologist and anatomist. The view certainly seems rational, as the great number of nerve centers and complex sympathetic network must necessarily have some function. By stimulating the various nerves connected with the heart the number of beats could be reduced or increased almost at will. Trophic disturbances could also be produced in the heart muscle, and what more was there to solve?

Engleman, an acute observer, happened while experimenting on an animal to notice that there was a rhythmic contraction of the ureter when all the nerves were severed; a segment of the same ureter would continue this rhythm; this led to the founding of a new theory, viz., the innate contractile nature of muscle.

Gaskell in England immediately began to study the muscle of the heart and showed that the vagus was not, at least constantly, an inhibitor of the heart, and when his great disciple, Martin, kept a mammalian heart beating outside the body for some months the myogenists seemed to have the best of the argument. This latter theory has been greatly strengthened by Professor Loeb of Berkeley,

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whose work on the influence of certain salts on the contraction of muscle has opened a wide field both to the physiologist and the clinician; and, though these chemic stimuli have not yet put us in possession of facts to warrant our feeding the heart certain ions, yet I see no reason why such treatment may not be later adopted.

If I might say a word "en passant" to those who are interested in heart work, it would be to study more closely the relations of the heart to the fluid it contains. An old theory and one I fear yet insufficiently abandoned "is that the heart is the last to suffer in wasting diseases," when as a matter of fact it is the first to suffer. Those who are interested in the myogenic theory would do well to consult the work of Cyon, who is the ablest exponent of this theory.

There is a late development in the anatomy and physiology of the heart which I must mention and one which I fear has passed like a brainstorm over our profession. This theory gives to the heart a sort of brain or a central distributing and conducting organ known as the "bundle of His." Many clinicians and not a few of the physiologists would have us believe that here lies the center for the control of blood tension heart rhythm; in fact, the sum total of the heart's activities. The probabilities are that there is more or less truth in all these contentions, but not all the truth in any one.

Comparative anatomy would lead us to the conclusion that in the lowly organized heart the beat is entirely due to the contractility of the muscle; but in the highly organized heart, as found in all mammals, it becomes necessary to have a nervous control. That is, conditions of temperature, digestion and muscular action are so complex and the calls made upon the heart so varied that there must be some unusual means of increasing or slowing the beat, and also of raising or lowering blood tension. This must necessarily be done by some mechanism connected with but not necessarily a part of the heart muscle.

In referring, again, to the "bundle of His" I may say that it will in no way conflict with the theory just advocated, but rather supports it. This bundle lying in the auriculo-ventricular walls is certainly a distinct anatomical body having its own capsule, surrounded by its own ganglia and closely related to the endocardium; paler in color than the adjoining muscle, connected with each heart cavity, it certainly must be thought of both in physiological and pathological conditions. When the final word is said, however, I think this muscular and nervous bundle will have shrunken in significance relative to its anatomical proportions. I will have more to say concerning this bundle when speaking of the pathology of the heart.

Pathology: Virchow was the first to describe acute parenchymatous myocarditis, a condition which he commonly found associated with all fevers. Zenker, who did much work on this acute condition, held that the change was due to the high temperature, and the higher the temperature the more liable was the heart to suffer. This view was at once adopted by the practitioner, and efforts were made to keep the temperature down by all available means. The manufacturer of antipyretics reaped a harvest and the undertaker was made rich by the depressing effects produced on these weakened hearts; Osler was the first, I think, to suggest that the toxines and not the temperature caused the degeneration; it was Renault who proved this condition to be a parenchymatous change rather than inflammatory, as Virchow stated. This change was always accompanied by a segmentation and fragmentation of the fibre, also an enlargement and fragmentation of the nucleus, whereas the cement substance is somewhat dulled in appearance, more or less granular looking and swollen.

The heart on inspection is changed in color, size, and consistence, being described by some one as a sort of "dead leaf" color. Hektoen insists that it is neither the heat nor the toxines, but a want of proportion between the amount of work required and the ability of the fibres to do this work. In other words, a worn-out condition of the fibre; a good reason, by the way, why we should lessen the work put on the heart. It necessarily follows that if overwork can produce this change in a weakened fibre a great deal of overwork would produce the same change in a healthy fibre, and such we find to be the case in heart strain.

Daland in summing up recent literature on myocarditis quotes Fedeshi as having produced this condition by cauterizing a healthy heart, and, killing the animal a few days later, found conditions exactly resembling those present in the acute infections. This would lead us to the conclusion that any injury to the heart muscle may result in parenchymatous change. Just how far this degeneration can go without inducing permanent damage cannot at present be made out, but we are realizing more and more that many hearts which were never suspected and many more than were considered cured deceived us and the regeneration was not complete. In fact, many claim that this change is never wholly recovered, but leads to a progressive degeneration. This, I take it, is an extreme view.

The latest pathological announcement relates to the muscle "bundle of His," which I mentioned previously. The claim is made that in acute infectious diseases there is not a general myocardial change, but in a great number of cases, at least, the change is confined to this conducting bundle. They do admit that diphtheria does produce a general and acute rheumatism, a localized spotted subendocardial degeneration, but not so the other acute infections, and in 112 cases of acute heart failure examined by Tawara it was this bundle that was at fault in every case.

Erlangen of Johns Hopkins in his experiments proves that pressure on this bundle may produce irregularity, intermittency and even death; so that by analogy we may reason that an inflammatory deposit or vascular change in this bundle might do much damage. If these observations and experiments be true, then we must forsake, at least in part, our old position; but that the heart walls and the

valves take some part in these pathological changes seems to me undoubted.

Chronic myocarditis is comparable to arteriosclerosis, some fibre bundles being much more affected than others; the tendinæ and papillary muscles suffer most, especially those in the left ventricle. The ventricular wall subjected to the greatest strain usually suffers most, but other questions of interference with the circulation, etc., have to be considered; that overwork and high tension are responsible for many of these changes is as true as in arteriosclerosis.

The coronary arteries decide in great masure the condition of the heart walls, as they preside over nutrition. If one coronary is more affected than another, the corresponding side of the heart suffers most. The left coronary, owing to its situation, is most frequently affected, and for this reason left-sided heart trouble is more common than right.

This paper will not admit of the discussion of brown atrophy and amyloid heart or the granulomata.

Symptomatology: Louis of the Charite was the first to describe the sequence of physical signs in the acute infectious heart. The first sign is accentuation of the pulmonary second sound. This is explained by overfilling of the auricle, due to a weakened ventricle. Second, mitral insufficiency, due to dilitation, accompanied sooner or later by a mitral murmur at the apex. Third, reduplication, due to increased pulmonary and lessened systemic tension, causing the aortic to close later than the pulmonary valves. Fourth, when the intoxication is uncontrolled and the disease runs into weeks, there comes a systolic basic murmur called by Potain cardio-pulmonic murmur. This murmur has stirred a good deal of discussion as to its causation, and is usually considered due to dilitation of the ventricle and auricle. A similar murmur is sometimes found in apparently healthy hearts, but you can make it disappear by asking the patient to stop breathing. It is not always found even in advanced cases, and it seems to me that a peculiar sagging and a change of relations between the heart and the great vessels is responsible for this bruit. The pulse rate is by no means constant, sometimes slow, sometimes fast, and occasionally irregular, the slightest movement often causing great acceleration of the pulse or even a sudden asystole. This is especially noticeable after pneumonia and diphtheria. Irregularity of pulse in these cases is not common and heart block, which has become so fashionable recently, has been in my experience a rare symptom.

Percussion often reveals little, as the dilatation is not sufficiently pronounced to be made out, but with much care the right heart will be found more or less dilated, the left ventricle being the last to enlarge.

Chronic myocarditis may be of many years' standing before discovery, and sudden failure leading to death may be the first suspicion that we have a heart lesion. These cases usually, however, begin their symptoms by palpitation, shortness of breath, indigestion and general muscular weakness.

Tachycardia, or the runaway pulse, may be the first evidence of a diseased condition. Such cases, as a rule, have a serious prognosis, as the great amount of overwork due to the rapid pulse dilates the heart beyond possible recovery, and palliation is all that we may hope for. Bradycardia, or very slow heart, is in my experience a somewhat rare beginning and is not so grave as a very fast heart. Arrythmia, which we sometimes find as a functional disorder, usually accompanies dilatation, especially of the auricles; whether the "bundle of His" really controls the rhythm of the heart, still needs confirmation.

Asthmatic attacks, sometimes called heart asthma, is a fairly common symptom, and such a symptom, appearing late in life, should always lead one to examination of the heart. Digestive disturbances due to engorgement of the portal vessels are quite common. Albuminuria is quite a common condition, and it is often hard to decide whether due to renal engorgement or to an actual renal disease.

Changed mental conditions and delirium are usually late and dangerous manifestations. Cheyne-Stokes respirations, a late manifestation, are as a rule, but not necessarily immediately fatal. Oedema and general anasarca usually come sooner or later. If the right heart be affected, then the pulmonary symptoms predominate—dyspnoea, rales, cough dilated jugulars, with venous pulse in the neck, etc.

On examination of the heart one finds enlargement and dilatation of varying degrees, with dilated valves and regurgitant murmurs. One must not forget that if the heart musculature become extremely weak, murmurs may disappear and return again as the muscle tone increases. The right heart may remain fairly good for a long time after systemic symptoms show themselves and vice versa. The intensity of the murmur offers no reliability as to the gross lesion. In those large hearts accompanied by contracted kidney there is still discussion as to the real cause of the trouble. Bright was of the opinion that the increased blood tension and hypertrophy were due to circulating poisons. Traube, on the other hand, put it down as a simple physical problem due to greater force being required to force the blood through the kidney.

It is a question whether simple parenchymatous changes in the kidney do produce a rise of blood pressure. The toxic theory has of late revived and diseased glomeruli are said to be responsible for the improper filtering of the poisons circulating in the blood; these poisons being responsible for the heightened blood tension.

There are cases of arterio-sclerosis and enlarged heart where the kidney seems perfectly healthy, but that there is a renal inadequacy in these cases is undoubted, as the blood pressure can be immediately lowered by lessening the nitrogenous diet or by a purely milk diet.

Treatment.

The acute infectious heart needs the greatest care; elimination of the poisons by keeping skin, kidneys and bowels active; absolute quiet in a recum-

bent position; as little moving in the bed as possible; no talking and no excitement; one day and one night nurse and no one else allowed in the room.

Antitoxine in diphtheria and streptococcic infections is of great value. Digitalis, if at all, should be given with caution. Spartein acts well and does not produce restlessness as strychnin sometimes does. Strychnin must always be considered, and is, one of our sheet anchors. Nitroglycerin in a crisis, but its action is so brief that its continued use is not usual. Alcohol may sometimes do good, but as a rule is harmful, and should be given with the greatest caution. Ammonia and its various salts are good stimulants and are followed by no bad effects unless it be on the stomach. After the danger point has passed, diet must be free, iron and bitter tonics administered and the convalescence prolonged for some weeks after all signs have disappeared.

In chronic cases, to use an Irish bull, the best treatment is to prevent the disease. These cases often have a long premonitory period, shown by high tension, pulse plethora and a tendency to a fat accumulation. It is here that a bit of good advice may save trouble. Smoking, drinking and overfeeding, especially of nitrogenous food, should be strongly condemned. High tension pulse is usually possible of diagnosis by the trained finger, but the sphygmo-manometer is much safer and with a little experience gives fairly accurate information.

Even after beginning degeneration in the heart and blood vessels, much good may be accomplished by regulation of the diet, changing of habits, the administration of iodides and nitrates and by nauheim baths. Cold bathing, in these cases, should be avoided; this is especially true of the fatty heart. Exercising of a quiet and unexciting kind needs to be recommended, such as golf playing and slow walking on the level. Hill climbing as recommended by Oertel, should be under the close supervision of a physician.

When the breakdown comes and compensation fails, then absolute rest in a recumbent position between blankets, in a temperature kept as near uniform as possible, must be enjoined. The food must be simple and easily digested, and if the kidneys are affected, the plain milk diet. Schott baths are of great value in slowing and regulating the pulse and dilating the superficial vessels. The resistance movements which go with these baths are of benefit, but should be given by a trained assistant.

Drugs.—Digitalis stands pre-eminent, but it must be of proper strength and proper preparation. The usual tinctures and tablets vary greatly in strength and composition, and many failures are due to an ignorance of this fact. The alkaloids of digitalis are not comparable to the whole drug. The English leaves should always be used, as they are stronger and much more uniform in composition than any other variety. I usually give infusion made fresh each time. Of the powder, one to three grains given in each dose. Boiling water is poured on the leaf or powder, allowed to stand from 20 minutes to half an hour, pour off the infusion, add cream and sugar, or lemon to taste and drink as ordinary tea three to four times a day after food. When given in this way it seldom disagrees with the stomach and scarcely ever fails to produce results. It is a double-edged sword, however, and must be watched. The patient should not be going about his daily duty when taking it. If the pulse becomes too slow or after being slow suddenly gets fast or if urine begins to diminish, then stop the drug for a few days. Spartein is of great service in doses of ¼ to ½ grain, alternating with strychnin every three or four hours. Strophanthus and the many other heart remedies may be tried, the former may sometimes add to the efficacy of digitalis. In full-blooded cases active purgation and stimulation of the kidneys are of assistance. Diuretin is especially useful in relieving dropsy and edema when the kidneys are healthy.

In greatly dilated hearts with very irregular pulse, general edema, etc., there is nothing that gives the relief which free bleeding does, and this may be repeated as occasion demands, being careful not to produce acute anaemia. Where there is abdominal dropsy, resort to tapping and repeat at intervals, being careful not to too suddenly lessen intra abdominal pressure.

Morphin, though a heart tonic of great value, must be given guardedly, especially where the kidneys are at fault. Where there is great restlessness and delirium nothing acts so well as morphin in ⅛ to ¼ grain doses.

The nutrition must be watched, especially in cases that have been depleted for a long time. We should give plenty of wholesome, easily-digested foods, with the addition of dry wines or a little good whisky. If the patient improves, massage and carefully-supervised resistance movements should be given. Business affairs all settled, there may be a long period of comfortable invalidism.

INJURIES OF UPPER END OF FEMUR IN ADOLESCENTS AND CHILDREN.*

By JAMES T. WATKINS, M. D., San Francisco.

On April 17, 1905, I saw J. W. of Eureka at my office. He was 13½ years old, moderately tall and weighed 152 pounds. He had never had any severe illness; but six weeks earlier a wagon had been backed up against his left hip, causing him to be thrown back against the side of the barn. He did not fall down, and although he complained of pain in his thigh and knee, neither then nor later did he go to bed. While in bed or lying down, he was free from pain. Still gradually his limp and pain had increased up to the date of his coming to see me.

Inspection showed a very much too heavy adolescent. He lay with his limbs in full extension, and with a very little more outward rotation on the affected side. Still the contours of the two sides were practically symmetrical. Measurements showed an atrophy of about a centimeter and a half of the affected thigh. There was about the same amount of shortening. The trochanter appeared to be a little above Nelaton's line, but the boy was so fat that this point was hard to determine. There was a little limitation of motion in all directions, most

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easily demonstrable in abduction, but it was not marked, nor the kind of limitation one encounters when there is a mechanical obstruction present. It was more like the muscular spasm of beginning coxitis. There was no trochanteric thickening; but sensitiveness to pressure over the femoral head and neck. While lying on the table he was not able to raise his extended leg from it. His temperature was normal, and a general physical examination elicited nothing further.

Disregarding remote possibilties, the differential diagnosis had to be made between (1) beginning coxitis, (2) traumatic coxa vara, (3) fracture of the femoral neck, and (4) epiphyseal separation. Such a differentiation being necessary because of its possible influence upon prognosis and treatment.

(1) The symptoms which appeared to point to a beginning coxitis were the limp, the atrophy, and the muscular spasm. The history of an introductory injury being not unusual with coxities, while the slight amount of shortening present might have been congenital. On the other hand, with a coxitis presenting so marked a degree of disability, the pain and weakness always and increasingly present while the boy was up, would not regularly and at once disappear on lying down; and a cross examination would elicit other symptoms of local and constitutional disturbance, night cries, trochanteric and periarticular thickening and infiltration, a low febrile movement, more marked atrophy, etc. Coxitis could therefore, with a reasonable certainly, be counted out.

(2) Traumatic coxa vara is uniformly consequent upon an injury, most frequently a fracture, of the femoral neck. But the change in the relation of the neck to the shaft would result in a lateral contour which deviated markedly from the normal, in more shortening, and in a distinct advance of the trochanter above Nelaton's line. Motion, while restricted in abduction, would be abnormally free in adduction. The patient would be able to raise his leg from the table. The limp, in proportion to the extent of the deformity, would be appreciably less, and Trendellenberg's symptom would regularly be present; but this is not the clinical picture presented by my patient. Evidently, then, the diagnosis lay between a fracture of the femoral neck and an epiphyseal separation. In this relation certain facts, first emphasized by Royal Whitman, had to be borne in mind. Epiphyseal disjunctions are far less common in all parts of the osseous system than fractures. Both are due to violence. Both, when occurring in young persons, are usually incomplete separations. Fracture of the femoral neck is relatively common in childhood. Only as the time for the ossification of the upper femoral epiphysis draws near does the protecting ring of cartilage become absorbed, leaving the epiphysis relatively weak. In a personal statistics covering 30 cases, of which 5 were epiphyseal disjunctions, Dr. Whitman noted that fracture occurred oftenest in healthy children as a result of direct violence; that disability was immediate, but lessened with repair; that the result was a slight limp and limited abduction, from the depression of the femoral neck, the condition resembling the impacted fractures of adults. The physical signs being shortening, outward rotation and elevated and prominent trochanter. Because the injury is not actually within the joint, motion is free, except where it is limited by the osseous deformity, that is in abduction, inward rotation, and sometimes in flexion.

Epiphyseal separations, on the other hand, occurred as the result of a twist, strain, or other slight injury, not in children, but in adolescents (his patients' ages ranged from 13 to 19 years), who were usually overgrown or over-heavy. The immediate disability was a slight limp, some discomfort in the thigh, and stiffness, persisting for weeks or months, when, after perhaps a second injury, or without it, there would suddenly appear a very marked disability and aggravation of all symptoms. At this time the physical signs were but little shortening, with, however, marked outward rotation; the trochanter not prominent, because the neck bears a normal relation to the shaft; motion very limited from muscular spasm, the epiphysis, and therefore the injury, being wholly within the joint. There may further be joint effusion, sensitiveness to pressure, and occasionally a resistant swelling appears in Scarpa's space. The epiphysis itself is, in advanced cases, displaced downward and backward.

With these facts in mind it was not difficult in my case, to diagnose an epiphyseal separation in a beginning stage where probably little more than the cartilaginous protecting envelope was ruptured. Several radiograms which were subsequently made showed the neck projecting at a normal angle from the shaft; while at the epiphysis appeared a distinct gap directed almost horizontally through perhaps two-thirds of its thickness.

In one of Whitman's cases which had progressed to the second stage, that of great disability, he found it necessary to open the joint and chisel off the sharp forward projecting portion of the neck; in another case he had to complete the epiphyseal separation, to take out a small wedge of bone, and, with the chisel in the space thus obtained, to lever the downward and backwardly displaced epiphysis into place. The results in each case justified the procedure. Painter, of Boston, in a similar case, wired the epiphysis in its new location. His result was functionally less perfect than that in the foregoing cases.

Because there was so little distortion in my case, it seemed best to treat it as one would incomplete fracture occurring in a child; that is, to very carefully carry the limb outward to the limit of normal abduction, and to maintain it there in a plaster of paris dressing till consolidation was complete. This was done, and only after 4 months, the boy's weight having been in the meantime greatly reduced by a fever, he was allowed to be about without a supporting apparatus.

The boy is now 15 years old, 5½ feet tall, and weighs 189 pounds. I lately had him examined at home according to specific directions, and, so far as could be determined, one leg was as good as the other.

CHRONIC FLATULENCE.*

By ALFRED W. PERRY, M. D., San Francisco.

Flatulence is an abnormal and uncomfortable distension of the stomach or intestines by gas. I maintain that it has nothing to do with the kind of food taken, but is entirely dependent on want of tone of the abdominal walls, or those of the stomach or intestines. It is true it is only a symptom, but after middle life it often rises to the dignity of a disease, urgently demanding treatment. Flatulence may be acute or chronic, and these forms are dependent on the extent of the interference to the blood-supply of the muscular coats and the rapidity with which it takes place. It is a most distressing symptom when associated with the diseases of the fifth and sixth decade of life, particularly angina pectoris, arteriocapillary sclerosis, and uncompensated valvular heart disease. In these, while there is dyspnea or pain, on moderate exercise, there is often comparative comfort on repose, unless flatulent distension of the stomach or intestines is added; then there is trou-

*Read before the San Francisco County Medical Society.

bled sleep and discomfort during every waking moment. The distress of the flatulence becomes so urgent, that it seems the chief symptom to be treated.

The source of the gas is either air swallowed with the food, gas generated from fermenting food, regurgitated from the intestines, or exhaled from the blood.

Schaeffer (1) says that nitrogen and carbonic acid are exhaled from the blood into the stomach and intestines under varying conditions of pressure. When any fluid or semisolid passes down a tube in contact with air, a great deal of the air is carried down with it; the air so passing into the stomach while eating, is soon warmed and expanded, and this causes the fulness felt by healthy persons a few minutes after eating. In a normal state of the stomach this slowly passes off through the pylorus, or is belched up without inconvenience. Whereas the result of an organic stenosis, or a spasmodic closure of the pylorus, is a stagnation of the stomach contents, the alcoholic, marsh-gas, or some other fermentations form a great deal of gas which is long retained. The ill-nourished stomach walls (as the result of the stagnation gastritis) dilate under the pressure and cause an upward pressure through the diaphragm on the heart, causing palpitation, vertigo, dyspnea, and often a sense of impending death. Where the heart is weak and laboring nearly to the limit of its power, sudden death is often produced. Albert Abrams (2) on gastrectatic dyspnea found in two patients that inflation of the stomach caused the heart dullness to disappear entirely, and by the X-ray the heart was found above the third rib and the stomach reached up to the third rib. Oppenheim (3) found that extreme inflation of the intestines in animals kills by causing heart failure.

The pressure of the gases which are always found in the stomach, varies (according to Schaeffer) from 35 millimeters of mercury while fasting to 135 during digestion in health; the pressure of the carbonic acid in the blood in the capillaries is about 80 mm of Hg, and consequently it is exhaled into the stomach and intestines when the pressure of the gases in them is below 80 mm Hg, and conversely is absorbed into the blood from the stomach when the pressure rises above 90 mm Hg. Von Otto (4) found that after ligation of the pylorus and cardia in dogs, the empty and washed-out stomach became quickly filled with gas. A part of the flatulent distension may depend on weak abdominal walls. The principal element is loss of tone of the muscular walls of the stomach and intestines. This is met with in the highest degree in diseases where the muscular coats are affected; in peritonitis, in severe cases of typhoid fever, in strangulation of large extent of the intestines, in mesenteric thrombosis. Jackson (5) finds extreme distension of the abdomen the earliest and most constant sign of thrombosis of the mesenteric arteries. Chronic flatulence is found by Max Buch (6) and Ortner (7) to be a frequent symptom of arterio-sclerosis of the mesenteric arteries. Kader (8) finds that any reduced blood supply to the intestines causes distension. A familiar picture of the East Indian famines are the young children with emaciated faces and limbs and enormously distended abdomens; this is evidently from loss of tone from sub-nutrition. In those conditions, on the contrary, of increased tonicity of the muscular system, the intestines are contracted down into almost solid cords, as in tetanus, meningitis, and lead colic, in spite of the presence of constipation, half-digested food, and ferment germs, elements which should produce flatulence. Young and middle-aged dyspeptics who have constant heartburn and eructations, evidences of gastric fermentation, complain little of distension. The only young patients who complain of flatulence are the neurasthenics and hysterics, who have a low blood-pressure and a consequent congestion of blood in the splanchnic circulation.

I have shown then that flatulence, severe enough to demand treatment, occurs only in conditions where the muscular tone of the abdominal viscera and walls is decreased; it has nothing to do with the quality of the food, except so far as a certain diet will produce sub-nutrition and loss of muscular tone. I do not mean to say that the amount of gas generated in the digestive tract is the same with all kinds of food; but where a food rich in cellulose (as beans, cabbage and spinach) forms a great deal of gas, it passes off easily and does not distress a person with normal intestinal tonicity. As flatulence arises principally from want of tone, how absurd is the often-repeated advice not to take starchy or green vegetable foods. Without starch or its derivatives (dextrin and sugar) as the principal part of our diet, one will slowly starve, and the resulting debility can only increase the flatulence; without the green vegetables the intestinal peristalsis will decrease. The worst case of flatulence I ever saw (complicated with daily attacks of angina pectoris) was greatly benefited by spinach, lettuce and carrots, and the anginal attacks lessened. I have found Koumiss or sour milk, 6 to 8 ounces, taken one-half hour after meals, to be of the greatest benefit. Among drugs (on which I do not place much reliance), the best are strychnia, quinia, and especially extract of calabar bean. Oppenheim (3) found that animals put into a dying condition from extreme inflation of the intestines, if the air was let out and extract of calabar bean given, the animals recovered.

The flatulence depending on loss of muscular tone, any diet which leads to sub-nutrition, by the avoidance of any class of foods on the plea that it produces flatulence, can only make it worse. The adult body must have enough food to produce 2300 calories and 50 grammes of dry albuminoids (producing 205 calories) are enough. As found by the latest experiments of Prof. Chittenton of Yale College, you must also have 250-300 grammes of starch or its derivatives in the daily diet. You can change any article of food, but you must replace it by another of the same class or the nutrition will suffer.

The abdominal cavity is enclosed by the abdom-

inal muscles, the diaphragm, and pelvic floor, and in order that the symmetry of the abdominal cavity shall be maintained, each must have nearly equal strength; these muscular groups are antagonists and must develop together. To increase the power of a muscle it must not only have food but exercise; no drugs will make a muscle grow. The means of increasing the abdominal tonicity are electricity and exercise. The Faradic current has no effect on the intestines; the galvanic current rapidly interrupted has also no good effect; a current of 10 to 50 M A with 10 to 80 interruptions per minute produces strong intestinal contractions. The sinusoidal current was found by Albert Abrams to act well on the intestines. Horseback riding is a very good form of exercise; all the various forms of resisted movements. A very simple and effective home treatment is for the patient to place a ten-pound weight on the abdomen while recumbent, and to raise it up and down by the abdominal muscles for ten minutes twice a day.

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MINUTES OF THE CALIFORNIA PUBLIC HEALTH ASSOCIATION MEETING AT WOODLAND, OCTOBER 25, 1907.

The meeting was called to order by the president, Dr. A. E. Osborne, of Santa Clara, at 1:00 p. m.

Minutes of the last meeting read and approved.

The president's modesty prevented the delivery of an address and he suggested that the time before the reading of the papers be devoted to discussing any matters that might be of interest.

The means of getting a better attendance and interesting health officers was discussed. Dr. Regensburger moved "that the secretary notify the different city and county health officers of the meeting and request that they send a deputy, the county or city to pay the expenses." Seconded and carried.

President Osborne suggested that a communication be sent to each health officer urging him to present the matter to his board and urge the justice of the city or county paying the expense.

Dr. Richardson brought up the subject of disinfection after and during a case of tuberculosis. It was urged that all rooms occupied by a case of tuberculosis should be disinfected after death or removal. During occupancy they should be kept clean. Sunshine and fresh air are the great enemies of tuberculosis and should always be allowed free ingress.

At 2:00 p. m. the president introduced Dr. H. J. B. Wright, who read a paper, "Experiences of a Health Officer," which was full of good thought and suggestions, dealing largely with collection of garbage, vital statistics, milk and tuberculous cows.

The discussion was interesting, many of the members taking part. Dr. Simpson said that a solution of one part formalin to nine of water sprinkled on a pile of garbage, garbage can, or in sinks, would destroy the odor. Dr. Richardson, of Salinas, thinks that too much stress is laid upon the tuberculous deposit being in the udder. If a cow has tuberculosis, no matter in what organ, the discharges are liable to be full of the bacilli and are dangerous.

President Osborne thinks the people are not ready to pay the added expense for pure milk and need educating. He also said that if affected cows were turned out on the range many would recover, and the loss would be less to the dairyman. Dr. Browning asked what would be the effect of parturition on these cows—would they not rapidly break down?

Dr. Osborne stated that less than one-tenth of one per cent of calves from tuberculous cows are tuberculous, and that if they raised two or three calves the loss would be small.

Dr. Regensburger thinks the municipality or State should bear the loss when the tuberculous cows are killed to protect the people.

Dr. Simpson said that the tuberculin test on cows had a curative effect, and cows having it and turned on range gained rapidly.

Dr. Wright, in closing, said we must take things as they are. That to get good milk from non-tuberculous cows we must see that no tuberculous ones go into the dairy, and that after that it must be kept clean.

Prof. M. E. Jaffa, Director of the State Pure Food and Drug Laboratory, read a paper on "Some of the Phases of the Pure Food and Drug Law.' The lecture was able and interesting and illustrated with stereopticon slides. He explained the law, that all foods and drugs must be honestly labeled, and that when this is done there will be a material falling off of the sales of many articles. That a mother will be more careful in giving medicines to her children when she knows they are composed of alcohol and opium. He showed by the results of experiments that food preserved with borax, boracic acid and salicylic acid is detrimental to health. He compared the nutritive value of the many prepared breakfast foods with white bread, and showed that while healthful, they did not contain the amount of nutriment claimed. The many health drinks, as substitutes for coffee, do not contain as much nourishment as skimmed milk.

Dr. W. F. Snow, of Stanford University, delivered an illustrated lecture on "Observations of Sanitary Work in Eastern Cities," from a tour of which he has just returned. Many of the Eastern cities are carrying on campaigns of education through street car advertising, distribution of literature, and public meetings. Many civic bodies are being interested and are dong a magnificent work in improving the sanitary condition of the cities and homes. The feeling is growing that no political influence should be allowed to interfere with public health. He recommends that every county board of health should be better organized and have a paid secretary, that a sanitary survey be made of the water sheds, dairies and vegetable fields of the State and a better cooperation of local boards with the school authorities.

At 5:30 the meeting adjourned until 7:30.

At 7:30 the evening session was called to order, and the papers of Prof. Jaffa and Dr. Snow were briefly discussed.

Dr. Browning moved that a legislation committee of three be appointed, the president being one, to consider needed legislation, and especially to have enacted a law by which the State should pay, in part or the whole, value of dairy cows killed for disease. Duly seconded and carried.

Dr. Snow moved that an organization committee of three be appointed to investigate the methods of Eastern organizations working in the interest of public health, and to organize and bring into closer touch the several organizations in this State. Seconded and carried.

Both committees instructed to report at next meeting. Committees to be named later.

Dr. C. C. Browning, of Monrovia, gave a lecture on tuberculosis, illustrated with the stereopticon.

No synopsis of the lecture could do it justice, for every sentence was full of thought and showed a complete mastery of the subject, and the hearers, at the close, saw this dread disease in the light of a natural growth upon a soil they had made fertile for its reception. They also were shown how to avoid inviting the trouble, and the probability of a cure if early attention is paid to the case.

At 10:30 the association adjourned to meet at San Diego at the time of the meeting of the State Society.

HEALTH OF SCHOOL CHILDREN.

By Dr. ERNEST BRYANT HOAG, Pasadena, Cal.

In accordance with your request, I here give you an outline of the work of the Medical Examiner in the Public Schools and in Throop Institute at Pasadena. At Throop Institute I have an office on the main floor. An appointment is made with each of the 350 students to meet me at the office at a given time. I examine them as thoroughly as possible under the circumstances and fill out a record card. Where it is thought necessary a letter is sent to the parent or guardian. Advice is given the students along appropriate lines. In very many cases they are referred to specialists for treatment of eyes, ears, nose or throat. General advice in regard to diet, sleep, exercise, etc., is given. In some cases the student is advised to drop some of his work, and in a few cases I require him to do so.

The institution gives me absolute authority in these matters. Teachers report to me any student who seems to be ailing at any time, even though he has had his routine examination. Students deficient in the quality of their work are reported both to the dean and to the medical examiner. Special talks on sexual hygiene are given to students in small groups selected according to age. The care of the health is considered a part of education, not as something separate from it. Teachers are advised how to detect signs of defected or failing health. The medical examiner gives a course on hygiene which as far as possible, is in the laboratory and so is practical.

In the public schools the idea is much the same, but as there are 4000 pupils I can only look after the worst cases at present.

There is to be an office for the examiner in the High School Building. Defective pupils which the teachers can discover (after advice on how to do so) are sent to this office. A letter of advice is sent to the parents and they are referred to their family physician. The idea is to correlate physical condition with mental condition. All delinquent and truant children are referred to me. The board of education considers that the medical examiner must decide many questions which formerly were relegated to an artificial system.

Promotions, ungraded classes, etc., will be largely under the advice of the medical examiner. As soon as possible he will be given assistants in this work. At present the examiner will spend at least a part of his time in the school rooms in observing the pupils in their daily surroundings. Eventually all teachers will be required to take a physical examination.

I spend from 8 to 9:40 at Throop Institute, and from 1 to 3:30 in the public schools. Both positions pay fairly good salary, and the examiner is given every possible encouragement and help in the work. I believe that New York City, Los Angeles and Pasadena have at present the most effective systems of medical examinations in this country. It is not the quantity of work done, but the quality which counts. Prof. Leslie in Los Angeles has charge of the work in that city, and is deserving of very great credit. He has three medical assistants. I guess it is fair to say that the system used in Pasadena is largely my own idea. I feel greatly interested in the work and believe it will eventually be a new medical specialty.

NEW AND NON-OFFICIAL REMEDIES.

(Continued from October.)

IODOFORMOGEN.

A nearly odorless mixture of iodoform and albumin.

Actions and Uses.—Its action is that of iodoform, which is slowly liberated in connection with wound surfaces, making the action more persistent. It limits secretion, favors granulation and promotes drying. Iodoformogen is recommended as a dusting powder for ulcerated surfaces. Dosage.—Being about three times as voluminous as iodoform, it is usually applied undiluted to the affected parts. It may be used as a snuff in ozena, mixed with an equal amount of boric acid. Manufactured by Knoll & Co., Ludwigshafen a. R. and New York.

IODOTHYRINE.

Iodothyrine is a milk sugar trituration of the active principle of thyroid gland, 1 Gm. representing 1 Gm. of fresh gland and containing 0.0003 Gm. of iodine.

Action and Uses.—It is similar in action to Glandulae Thyroideae Siccae, U. S. P., but it is claimed to possess the advantage of more definite strength and absence of decomposable extraneous matter. Dosage.—Adults, 0.6 to 2 Gm. (10 to 30 grains); children 0.3 to 1 Gm. (5 to 15 grains) per day. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). E. Merck, Darmstadt (Merck & Co., New York).

ISOFORM POWDER.

Isoform powder is a mixture of para-iodoxyanisol, $C_6H_4(OCH_3)(IO_2)1{:}4{=}C_7H_7O_3I$, an iodoxyderivative of anisol, with an equal weight of calcium phosphate.

Actions and Uses.—It is a germicide and antiseptic in consequence of its oxidizing power and, in contradistinction to iodoform, it acts not only in a medium free from oxygen, but in conjunction with free access of air. It is claimed to be non-toxic in comparatively large doses and to be absolutely non-irritant to the unbroken skin. It is recommended as a substitute for iodoform. Dosage.—Internally, 0.65 to 2 Gm. (10 to 30 grains) per day. It is used externally as a dusting powder, as a paste with glycerin, as ointments, suspensions in glycerin, gauzes, etc., in strength varying up to 10 per cent. of pure isoform. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst, a. M. (Victor Koehl & Co., New York).

ISOPRAL.

Isopral, $CCl_3.CHOH.CH_3{=}C_3H_5OCl_3$, is 1,1,1-trichlor-2-propanol.

Actions and Uses.—Isopral resembles chloral in its action, but is effective in smaller dose. It is prompt in effect and apparently devoid of cumulative action. It has some degree of local anesthetic power. It may be used as a substitute for chloral hydrate and is serviceable as an alternative in cases in which it is necessary to give hypnotics for a long time. Dosage.—0.3, 0.6 to 1 Gm. (5, 10 to 15 grains) in capsules or wafers which should be dispensed in a well-stoppered glass vial. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

POISONING BY ANTIKAMNIA.

By HUBERT N. ROWELL, M. D., Berkeley.

On the evening of the 18th instant I was called hurriedly to see Mrs. M., an experienced nurse, who had a "fainting spell." She had been suffering from an ulcerated tooth, and upon the advice of her dentist, had taken antikamnia. She had taken ten grains.

I found her practically without pulse, cyanosed, with shallow breathing, and a "leaky skin." Collapse was clearly evident, and after half an hour's work with various restoratives she regained consciousness, but for an hour or more described a sensation of numbness in the extremities.

That hers was not an illustration of idiosyncrasy is proven by the fact that she had taken coal-tar derivatives in the past, but under the direction of her physician. The package from which the tablets were taken, was marked "sample package," and she alleges that it was left at her door.

A TOY REFLECTION.

To the Editor of the State Journal: During the past few months I have watched the medical journals in the hope of seeing a warning to the general public concerning a new toy that seems to meet with a national general acceptance by the thousands of our little ones. I refer to the popular "Teddy bears." Is it possible to conceive of a more ready germ carrier? Surely it would seem a perfectly ideal one to disseminate many of the now prevailing diseases of childhood. I need only refer to scarlet fever, measles, whooping cough, influenza and decidedly not least, diphtheria. I have only mentioned a few, but if we go further and think of ring-worm and the many animal parasities that infect from our household domestic pets, that naturally come in contact with the toys referred to, my article, intend to be short and a starter, would be a lengthy one. In a large and varied general practice I have repeatedly noticed in homes having these toys that every child in the household would contract the prevailing disease. The little tots take so kindly to such playthings, being of a soft and woolly nature, that they kiss and fondle them, to be passed along. I will not dwell longer on the subject for a few words will be sufficient and perhaps cause others to instruct those in their care.

ALFRED H. TICKELL.

COUNTY SOCIETIES.

MARIN COUNTY.

The Marin County Medical Society met at the residence of Dr. E. Chipman in Ross Valley, October 12th. The following members were present: Drs. Jones, Howitt, Hund, Mills, Galehouse, Mays, Crumpton, Chipman, Powers and Kuser. Dr. Jones presided. The Society concluded to follow out the post-graduate course as mapped out by the Council of the A. M. A. The meeting nights were changed so that the Society will meet at Dr. Jones' office every Thursday evening at 8 o'clock. After the meeting a splendid banquet was served by the host and hostess, which was greatly enjoyed by all present.

H. KUSER, Secretary.

SANTA CLARA COUNTY.

The regular monthly meeeting was held November 20th, with the following members present: Drs. Snow, Harris, Newell, Fraser, Lyon, Hopkins, Beattie, Jordan, Wagner, Whiffen and Park. Dr. C. E. Thompson was the guest for the evening. Four new members were added at the meeting, they being Drs. Kocher, Blair and McGinty of San Jose, and Dr. Tourtillott of Morgan Hill.

Dr. Newell read a paper entitled "Perforation in Typhoid Fever Successfully Treated by Operation."

Dr. Beattie opened the discussion, and was followed by Drs. Whiffen, Hopkins, Park and Snow, with Dr. Newell closing the discussion.

K. C. PARK, Secretary.

SAN JOAQUIN COUNTY.

A special meeting of the San Joaquin County Medical Society was held in the office of Dr. Barton J. Powell, October 12th, at which time the doctor was presented with a traveling bag on the eve of his departure for Europe in recognition of his services as secretary of the Society. The presentation was made by President R. R. Hammond. Dr. Powell was taken completely by surprise but responded feelingly in a few well chosen words. After an hour spent in pleasant conversation the Society adjourned.

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The regular monthly meeting of the San Joaquin County Medical Society was held at the residence of Dr. S. W. R. Langdon November 8, 1907. President R. R. Hammond being absent Dr. Langdon, First Vice-President, presided. Members present: Drs. J. D. Dameron, J. P. Hull, C. R. Harry, S. W. R. Langdon, J. G. Thompson, W. W. Fitzgerald, I. B. Ladd, Minerva Goodman, H E. Sanderson, Hudson Smythe, Margaret Smyth, A. W. Hoisholt, J. D. Young, S. F. Priestly, H. N. Cross, D. F. Ray, E. L. Blackmun, J. V. Craviotto, L. R. Johnson, B. F. Walker, F. P. Clark and R. B. Knight; Dr. A. Henderson of Sacramento as guest.

The minutes of the last regular meeting of September 27 were read and approved. Also the minutes of the special meeting on October 12 were approved. A communication from Dr. Jones, Secretary of the State Society, relative to the appointment of a member of the County Society to represent the County on the National Auxiliary Legislative Committee was read and ordered filed, and upon motion duly moved and seconded the president was given power to appoint such member. The names of Drs. B. F. Walker and L. R. Johnson were approved by the Committee on Admission and duly enrolled as members of the Society. A communication from Coroner B. C. Wallace relative to the crime of abortion was received and upon motion it was ordered that a copy be sent every practitioner in the county.

The paper of the evening was "The Operative Treatment of Fractures," by Dr. A. Henderson of Sacramento, who supplemented his paper by numerous radiographs and X-Ray plates of the various cases under discussion. Dr. C. R. Harry opened the discussion, followed by most of those present. After refreshments the Society adjourned.

R. B. KNIGHT, Secretary Pro Tem.

RIVERSIDE COUNTY.

The first meeting of the Riverside County Medical Society, following the summer vacation, was held one month ago, at the home of our Vice-President, Dr. C. Van Zwalenburg. We had with us Drs. Stanley Black and F. C. E. Mattison of Pasadena. Dr. Black addressed us on the subject of "Branch Libraries"; referring to the proposed branches of the Barlow Medical Library of Los Angeles, which have been established at Pasadena and San Diego, and we hope may be located in Riverside. Our Society voted that we raise the funds necessary to establish such a branch and a committee appointed to find "housing"

room, arranged to have it made a restricted part of the Carnegie Public Library, the medical profession enjoying special privileges in using it.

Dr. Mattison spoke to the society on the subject of "Pure Food" and "Illegal Practitioners." The matter of a clean food supply has been kept well in hand by our City Health Officer, Dr. W. W. Roblee, and the officers of the Society have charge of the prosecution of illegal practitioners. We are practically free from these offenders, the result of continued vigilance and a sympathetic law-enforcing district attorney.

At our meeting held Monday evening at the home of Dr. T. R. Griffith, Dr. H. A. Atwood of Riverside read a paper on "Atonic Dilatation of the Stomach." The Society voted that in compliance with the suggestion of the Secretary (or some other officer of the A. M. A.) we should make an effort to increase our membership and invite all licensed physicians not practicing sectarian medicine to come in with us.

The Southern California Medical Society meets at the Glenwood Hotel in December. It may not be out of place to have it noted that through the society as a whole or through the efforts of one or more of its individual members, a public meeting was held this year, when the physicians discussed the tuberculosis question, its "Cause and Prevention." A paper was later read before a convention of W. C. T. U. Workers on the "Patent Medicine Fraud" and more than two hundred Viavi reprints were circulated.

We have abolished "lodge contract practice," "three-dollar old line insurance examinations" and "one dollar lodge insurance examinations." The vaccination law is complied with or enforced. We are trying to establish the branch medical library and we hope to increase our membership and thereby increase our influence. Next month the compulsory vaccination law will be discussed or rather debated publicly.

GEORGE E. TUCKER, Secretary.

SANTA BARBARA COUNTY.

As we are nearing the close of the year, a resume of the work of the Santa Barbara County Medical Society may prove interesting to the readers of the State Journal of Medicine. Our Society has only monthly meetings, and as the sessions only average about two hours each—or twenty-four hours in the course of the year—we can not be expected to get over a great amount of scientific space. Therefore, when we cast up accounts, I consider we have done remarkably well, though we hope to advance on this during 1908. The January session was for business and the election of officers. The subject of medical ethics, fees and collections, and relations between physicians and druggists was discussed.

The February meeting was semi-public. The subject of school hygiene and physical defects in pupils being set for discussion. The Superintendent of City Schools, High School principal and grade principals and teachers were present in good numbers; along with members of Board of School Trustees. The meeting was interesting and enthusiastic and was productive of much permanent good.

In March we took up the subject of hygienic bathing. At this also some of the school principals were present.

The April session was occupied with the important subject of gastric ulcer.

In May we took up typhoid fever. Also this month the Society made an important departure in the calling of a special session (which was of the nature of an informal reception) in honor of Mr. Samuel Hopkins Adams, of "Great American Fraud" fame. At this special session, in addition to members, we entertained the Superior Judge and other prominent citizens. The judge and other gentlemen joined in the discussion of Mr. Adams' work.

In June we had an interesting paper on "Chronic Suppuration of the Middle Ear."

The July meeting was occupied with a symposium on "Cholelithiasis."

In August the Society took up the question of "Some Sanitary Problems."

In September we had a most exhaustive symposium on "Anesthesia," going fully into its history, kinds and methods.

In October the Society listened to a timely paper on "Polyadenitis Malignant" (plague). Also an essay on "Arterio-sclerosis" and its relationship to toxemia and intestinal intoxication.

In November we were visited (on invitation) by a member of the San Francisco County Medical Society (Dr. Cullen F. Welty), who favored us with a good and practical paper on the "Pathology of Acute Purulent Otitis, With Indications for Operative Interference in Acute Mastoiditis."

And finally, we are expecting in December a symposium on "Infantile Paralysis." Also we have invited to address us at this session, on the important subject of milk contamination, one of the vetinary inspectors of the United States Government (Dr. Rosenberger). Thus you see we are really alive down in Santa Barbara, and are, I firmly believe, gaining some in strength and importance. We are trying to emphasize practical clinical reports at our monthly sessions, and I am pleased to say that gentlemen are commencing to report and exhibit patients and pathological specimens.

The attendance throughout the year has only been an average one, but the members are coming out a little better all the time. As the result of the year's work then, I can say that we have advanced some scientifically, and strengthened friendly and cordial relationships in the profession. Some additional members are coming in the first of the new year.

WILLIAM. T. BARRY, Secretary.

PUBLICATIONS.

The Immediate Care of the Injured. By Albert S. Morrow, A. B., M. D., Attending Surgeon to the Worlhouse Hospital and to the New York City Hospital for the Aged and Infirm; Assistant Attending Surgeon to the Manhattan Maternity Hospital. Fully Illustrated. W. B. Saunders Company, Philadelphia and London.

Layman and doctor are liable at any time to be confronted with an emergency which, through want of equipment on the one hand, or knowledge on the other, may prove a serious tax on their resources and ingenuity. A more general knowledge of "first aids" would not only be of benefit in the alleviation of suffering, but what is more important, prevent infliction of additional injury by the sympathetic, but ignorant bystander in his well-meant attempts to "do something." Hence, any book that would be available for general use would be a valuable one. Doctor Morrow in his book of 323 pages has met this requirement very successfully. For the special benefit of those without medical knowledge he devotes the first part to a brief outline of anatomy and physiology, presented in simple language as free as possible from technicalities. Following this are several chapters treating of bandages, slings, dressings and practical remedies (heat, cold, poultices, counter-irritants), antisepsis and disinfectants. The third and last portion deals with accidents and emergencies; hemorrhage, inflammation, contusions, wounds, burns, scalds, exposure to cold, fractures,

dislocations, sprains, asphyxia, removal of foreign bodies and poisoning. A chapter on the transportation of the injured terminates the book. Here the author follows the drill regulations of the United States Army Corps. Throughout the book the treatment is, with few exceptions, limited to temporary assistance pending the arrival of medical aid. There are numerous illustrations, many of them original, which go far towards clearing up points in the text which might otherwise be misunderstood. This book certainly justifies the author's claims and we unhesitatingly recommend it alike to physicians, nurses and laymen. K. I. L.

Behind the Scenes With the Mediums. By David P. Abbott. The Open Court Publishing Company, Chicago. Price $1.50 net.

Many years ago two little girls, the Fox Sisters, startled the world with their mysterious rappings. This was the beginning of modern Spiritualism. Soon after this, mediums began appearing all over the country, who could cause raps to sound on furniture, tables to tip, etc. Next, professional mediums began traveling over the country, giving exhibitions in rope-tying and cabinet manifestations. Later came the slate-writing, the billet test mediums, etc., until at the present day there are many hundreds of persons following this profession for a livelihood. There are several hundreds of them in Chicago alone.

In the present work, Mr. Abbott has given to the public a collection of the most valuable secrets of mediumistic work in existence.

Most of the secrets revealed in this book were obtained by Mr. Abbott directly from mediums, while he purchased not a few of them from dealers at exorbitant prices. He has given his very best secrets in this work; and being a practical performer himself, although not a medium, he has included only up-to-date secrets that are thoroughly professional and practical and such as are actually being used by professional performers and mediums of the present day, in mystifying an innocent public.

For the magician and performer this book is invaluable, while for the honest spiritualist it is a boon long needed. Honest believers in Spiritualism do not desire to be duped by impostors and charlatans. In this book many tricks of such persons are so thoroughly exposed, that by studying its pages any one may become a competent investigator of any phenomenon of a super-normal appearance.

That the reader may understand how the secrets herein revealed have been treasured and guarded from the public heretofore, and of the value placed on them by performers, we will state that the value of the secrets contained in this volume estimated at the prices charged for them by dealers, would run into hundreds of dollars. Not a few of the secrets contained have sold at twenty-five dollars each, while a number of them have never even been offered for sale, the little chapter on "Vest Turning" contains a secret that is being sold today for two dollars and fifty cents, while the secret contained in the chapter, "Performances of the Annie Eva Fay Type" was sold to a medium of Mr. Abbott's acquaintance for two hundred and fifty dollars.

Many of the slate tricks are worth at least ten dollars each, and the book is very complete in its exposure of slate-writing and billet work. The exposure of the billet tests of certain Chicago mediums of the present day is of great value. It is impossible to enumerate here all the valuable secrets which this work contains. Owing to the bearing of the subject on the question of personal immortality, the work has a certain philosophical import; and in addition to this, descriptions are presented in a very interesting manner.

Mr. Abbott is a member of the American Society for Psychical Research and has written on the subject for the journal of that society.

Tumors Innocent and Malignant; Their Clinical Characters and Appropriate Treatment. By J. Bland-Sutton, F. R. C. S., Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital, etc. Fourth Edition, With Three Hundred and Fifty-five Engravings. W. T. Keener & Co., Chicago. MCMVII.

Those who care only for the purely academic side of the study of tumors will find in this volume little of interest. Written more from the standpoint of the clinician than from that of the professional pathologist, it naturally has found greater favor amongst practitioners of medicine than scientific investigators. The story of this singularly varied and fascinating world of tumors was a bold thing to undertake; yet Dr. Sutton, peculiarly well fitted for the task, contributed four years ago an admirably well conceived one, which has since been revised and now appears in its fourth edition. In no sense, however, does the present volume constitute a complete review of the pathology of tumors, although it is evident that some effort has been made to embody a few of the ideas that modern investigations have brought with them. Since many of the recent achievements in the study of human pathology have had their origin in observations on lower animals the liberal use by the author of comparative pathology, for the purposes of illustrations, gives a breadth of view not ordinarily found in similar books.

The introductory chapter consists of a rather general discussion of tumors, brief allusion being made to such matters as the liability of organs to the development of tumors, environment in relation to their development, age distribution, multiplicity, and the transformation of innocent into malignant growths; but no mention is here made of the degenerative and destructive processes often encountered in them, of the characteristics which stamp malignancy, nor to the presence of new elastic tissue or nerves. The classification of neoplasms followed by the author is, in greater part, that usually found in text-books of pathology. The separation of the normal tissues into groups is useful, rather because it facilitates their study than because it expresses absolute and fundamental distinctions; the same may be said of all classifications of tumors. The attempt has often been made to classify them with reference to the developmental history of the tissues represented, and it has been generally believed that cells once differentiated in the primary embryonic layers cannot again be merged in type. While this principle holds good in general, particularly for the highly differentiated forms, certain recent studies have seemed to indicate that even this distinction may not be inflexible. Whatever the truth of this may be, it is certain that the cells derived from one embryonic layer may under more or less perfectly understood conditions come so closely to resemble morphologically those of another layer, that a structural differentiation, with our present methods of study, is not always possible. Nevertheless this histogenetic principle of classification is useful and suggestive.

These points have already been exhaustively considered by Marchand in his paper on "The Relationship Between Pathological Anatomy and Embryology," and later by Minot in his admirable address on "The Embryological Basis of Pathology."

Almost the whole of the first third of the book, consisting of about 215 pages, deals with new-growths of the connective-tissue group. The essential points are given with more or less complete-

ness; but sometimes the histological and clinical descriptions are extraordinarily meagre. Thus, the section on myeloma can be regarded as containing neither a precise pathological description nor a good clinical picture of the condition. The myelocytosis so often associated with these tumors is not even mentioned. The discussion of sarcomata likewise lacks precision and comprehensiveness. Sarcoma of the intestine is dismissed in a few lines, and in the list of references to this article Balzer's masterly paper and Libman's critical article are both omitted. About sixty lines are given to the discussion of sarcoma of the thyroid gland, although within the last few years Lartigau, and Muller and Speese, have contributed articles of some length. Still more disappointing is the chapter on sarcoma of the bones. One cannot avoid comparison with the classic paper of Gross published in 1879, or the more recent articles of Reinhardt, Kocher, Mayer and Coley. Much better, on the other hand, is the discussion of renal sarcoma. Attention is drawn to the bone metastases of hypernephromas. Of considerable interest in this connection is the paper of Scudder published since the publication of the present edition of this book. The following practical suggestions are made by Scudder: A bone metastasis may be the first sign of a hypernephroma; a bone tumor in a middle-aged or elderly person should suggest a metastastic hypernephroma, for a primary bone tumor in elderly people is uncommon; the bone metastasis from a hypernephroma may exist without symptoms for a considerable period; the kidney region should be palpated with great care in every case of bone tumor.

The brief description accorded melanosarcoma of the skin takes no cognizance of the noteworthy investigations of Unna, v. Recklinghausen, Ribbert, and of Gilchrist in this country. In the last few years the histogenesis of these tumors has been the subject of lively controversy. It was the earlier opinion of pathologists that a metanosarcoma may originate, as does every other sarcoma, from any place in the connective tissue, and is distinguished only by the pigment which is formed by the tumor cells; in other words, a melanosarcoma was classified as a species of sarcoma. The first investigator to contest this opinion was v. Recklinghausen, who asserted that pigmented nevi and the melanosarcomata arising from them, originate only from a particular variety of connective tissue cells, namely, from the endothelia of lymph vessels and clefts. Unna, on the other hand, in 1893 advanced the view that they arise not from connective tissue but from epithelia, which at some time have been cut off from their original site and have become completely surrounded by connective tissue. Hence Unna insists that these tumors should be classified as melanocarcinomata and not as melanosarcomata. This opinion was later adopted by Krohmayer and Delbanco. Ribbert, however, believes that these tumors are of connective tissue origin; but according to him, not every connective tissue cell can give rise to melanosarcoma. While other authors have previously held that the pigment and its distribution in these tumors were entirely independent of its growth, Ribbert asserts that a melanotic tumor can only originate from a special connective tissue cell which produces pigment—the chromatophores. Most writers who have since investigated the subject, including Gilchrist, Johnston and Schalek, favor the view expressed by Unna.

The endotheliomata are also lightly passed; considering the wealth of contributions which have appeared the twenty-five lines devoted to these tumors scarcely do justice to our knowledge regarding them. Since the discovery in 1862 by v. Recklinghausen of the lining cells of the lymph vessels, interesting controversies have been carried on concerning the nature of endotheliomata. For a time considerable difference of opinion prevailed regarding the derivation of endothelium, although at the present time it is generally conceded to be of mesothelial origin; later, discussions became largely centered on the relationship of tumors originating from the lining cells of cavities like the peritoneal and pleural and those springing from the endothelium of lymph and blood vessels. However, Sala's researches seem to have established the identity of the endothelium of blood and lymph vessels and that of the serous cavities. Minot, on the other hand, still persists in distinguishing between the two by calling the former endothelium and the latter mesothelium. Interesting are also the investigations of Heidenhain, Hamburger and Ranvier, who have shown that endothelial cells possess a secretory function and take part in the elaboration of lymph, secrete hyaline and amyloid substance and mucin. Briefly, most observers now consider the endothelial cell of mesodermic origin, a modified mesenchymal cell, such as forms the connective tissue around it, retaining its ability under certain conditions to behave like a connective tissue cell, yet morphologically like an epithelial cell, acquiring at least some of the functions of the latter. The literature of endotheliomata is more or less confusing on account of variable namenclature employed in the past. Depending on the viewpoint of the writer these tumors have been variously described as endothelial sarcoma (Fischer, Cramer and Rindfleisch), sarcoma plexiforme (Ewetzky), alveolar sarcoma (Billroth), angiosarcoma (Waldeyer, Kolaczek and Hippel), endothelial cancer (Schulz), connective tissue cancer (Neumann), sarco-carcinoma (Bohme), etc. For a fuller discussion of these interesting growths we recommend the learned contribution of Volkmann and the article in Lubarsch's "Ergebnisse der allgemine Pathologie, Jahrg. I., Abath. 2, p. 366; and Jahrg. II., p. 592, neither of which are mentioned in Sutton's list of references.

The practical importance of fibroid growths of the uterus is well reflected in the lengthy discussion accorded the matter. Most phases of the subject are well handled except the part devoted to malignant changes in fibroids which hardly sufficiently emphasizes the possibilities in this regard. Noble of Philadelphia has lately published the results of his own and others' investigations on these degenerations in 2274 cases which showed sarcoma in almost 1.5 per cent. From the study of 4880 consecutive cases he also corroborates the conclusion of Winter that fibroids of the uterus predispose to the development of cancer of the body of this organ.

The general aspects of the cancer question are briefly treated after the conventional manner. While no reference is made in the article to the incidence of cancer in different parts of the world it may not be amiss to allude to the painstaking paper of Guthrie McConnell on the geographical distribution of cancer in the United States based on the Twelfth Census. This shows that the incidence was greatest in the Pacific Coast region, 51.9 per 10,000 deaths; in the heavily timbered region of the Northwest, 46.8; in the Northwestern hills and plateaux, 44.5; in the prairie region, 43. It was least in the southern interior plateau, 18.1; in the Southwest Central region, 15.8, and in the North Mississippi River belt, 11.3. This agrees with the conclusions of Wolff, who showed that the distribution of cancer did not depend upon geographical conformation, rainfall, or elevation, but that it was apparently more frequent in great river valleys and in wooded districts.

Notwithstanding great activity shown within the last few years in the study of cancer its origin still remains obscure. Investigation, nevertheless, has

lately thrown a flood of light on many hitherto little suspected phases of the question. Knowledge of the scope and results of this experimental work is essential to a clearer viewpoint of the prevailing, but irreconcilable opinions held by different observers. The omission, therefore, in Sutton's resume "Concerning the Cause of Cancer" of the observations upon which these views are based is regrettable. The prevailing theories are merely outlined; and the historically interesting hypothesis of Thiersch is not even mentioned, nor do we find any reference to that championed by Ribbert in 1894. The account is not worthy of the labors and achievements of investigators who, although failing in the object of their quest, have contributed much which has had great influence in directing research along other and more promising lines.

Writers on the subject may be divided in two classes, one believing that the epithelial proliferation in cancer is due to some biological peculiarity of the cells themselves, the other that it is due to a living parasite. The well-known embryonic theory advanced by Cohnheim in 1882 is based on the assumption that in each of the primary embryonic layers more cells are produced than are necessary for the development of the adult tissues, and that some of these surplus embryonic cells do not develop into the normal tissues of the body, but persist as "rests" which have the "potentiality of growth" characteristic of fetal cells, although they present no gross or histological peculiarities which will permit of recognition. These supposititious "rests" once produced have an ultimate fate dependent upon various accessory conditions which may or may not act as a stimulus to their further development. It would be conceivable that an individual in whom these "rests" developed might grow to adult life and die without any accessory cause ever stimulating them to unlimited growth. Or the proliferation of these "rests" might begin at a very early stage of fetal life, and in this way the occurrence of congenital tumors could be explained. Or the accessory causes might become active during any period of life, early childhood, or young adult life, or the "rests" might remain quiescent during many years and be excited to growth only during later life. Thus could be explained the occurrence of exostoses at the time of greatest bone activity or of ovarian cysts at puberty or of breast tumor during pregnancy or the occurrence of cancer in late adult life. Of this theory of the origin of tumors Sutton says, "It is in itself a brilliant generalization, and has served a valuable purpose in leading to a great extension of knowledge in regard to vestiges and rests."

Ribbert's theory, which is entirely disregarded by Sutton, is based on the histological study of very early cancers. From such investigations he believes that the epithelial proliferation is due primarily to a separation of epithelial cells from their attachment to the normal epithelial layers by the action of connective tissue. These freed epithelial cells still retaining their power of growth, get into the clefts between the connective tissue cells, proliferate, and thus form islands of epithelial cells, which, freed from the normal restraining influence of other tissues, have an unlimited power of growth. There is some evidence, clinical and experimental, that normal epithelium, set free by accident or design from its original attachment, may retain its power of growth and produce nodules or cysts of epithelium, but there is no proof that malignant tumors may be so produced. Following injury, cysts lined with epithelium, however, have been reported by Wegner, Bohm, Le Fort, Garre, Blumberg, Paulet, Reverdin and Gironde. Cysts have also been produced experimentally by Schweininger and Kaufmann. Ribbert's hypothesis, fascinating as it is, still leaves us ignorant of the exact origin of cancer.

Observations made within the last two or three years have suggested the theory that cancers may be considered to be parasitic individuals engrafted on a normal individual, and that they are produced by the conjugation of cells in a way analogous to conjugation or sexual cells which produce a normal individual. Farmer, Moore and Walker investigated cancers and concluded that the reduction in the number of chromosomes in the mitosing cells occurred in the same manner as in the ripening of the sextual cells of animals and plants, and that the number of these chromosomes were half as numerous as in the somatic cells. Bashford and Murray have since confirmed this by observations showing a series of changes in the nuclei of malignant tumors throughout the whole extent of their known zoological distribution parallel to those characteristics of the maturation of the sexual elements of the metazoa. Sutton apparently is much impressed with these facts for he considers them with some fullness; and there is little doubt that this constitutes an important step in the solution of the problem of the origin of tumors.

As early as 1790 cancer was considered an infectious disease, but it is only since Thoma, in 1889, called attention to certain unicellular bodies in the epithelial cells of cancer that the parasitic theory came into vogue. Of recent years these and other bodies have been closely studied by Russell, Ruffer and Walker, Sjobring, Plimmer, Sanfelice and others, and for various reasons have been regarded by them as parasites, either blastomycetes or protozoa. The careful studies of Pianese, Borrel and Tadoa Honda, however, have shown that these bodies were the result of cell degeneration, certrosomes, etc. The experimental and "cultural" evidences of Schueller, Gaylord and others are not more convincing. From a review of the evidence the conclusion seems inevitable that little has been brought forward which justifies the assumption that cancer is parasitic in origin. A critical review of this theory was published a short time ago and may be found in the Third Report of the Caroline Brewer Croft Cancer Commission of the Harvard Medical School.

Cancer of the uterus is well handled. A more detailed description of the manner and extent of metastases would undoubtedly have added to the value of the discussion. The painstaking investigations of Kundrat of Wertheim's Clinc and the careful work of Baisch in Doederlein's Clinic are entirely overlooked. Kundrat's work is particularly noteworthy; it is based on serial sections of the parametrial tissue and lymph nodes from eighty cases of carcinoma of the cervix. Three years were consumed in this research and over 21,000 microscopic sections were studied. More recently Sampson has restudied the matter, corroborating the conclusions of the last named investigators.

In looking over the account of primary cancer of the common bile duct we find that the papers of Pic, Luzzato, Schuller and Letulle have been entirely overlooked; the description is so meagre that it is little else than useless. Much better is the discussion of tumors of the teeth. Some valuable observations have also been collated regarding new growths of the ovary and the testicles, but the piece de resistance consists of fifty pages on teratomata and dermoids. The book terminates with a good chapter on hydatid cysts of various organs.

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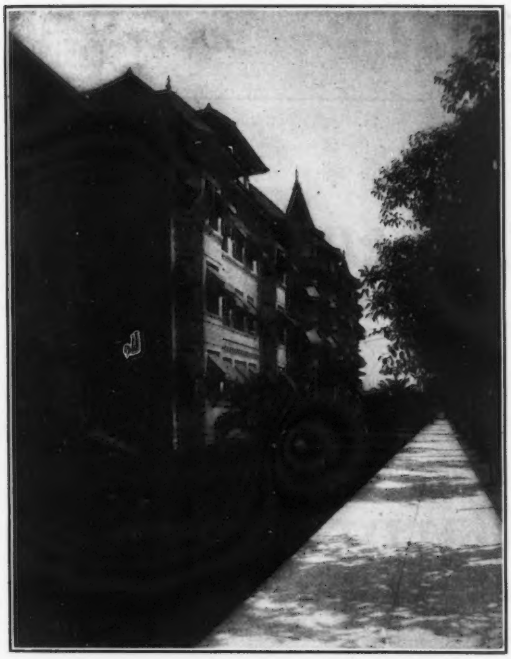

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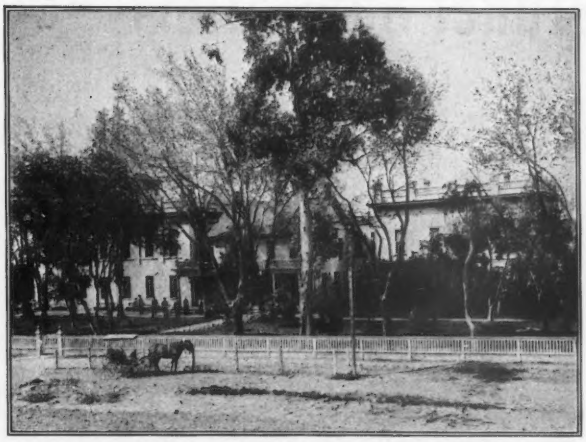

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